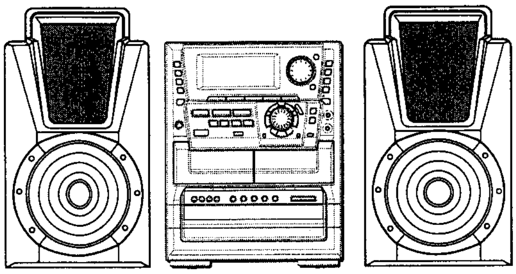
aiwa

aiwa SERVICE

NSX-D7
NSX-T7



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM: 2ZM-3MK2 PR4NM
- BASIC CD MECHANISM: 6ZG-1 SDFNSHM

- TYPE: U(D7),LH(T7)

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-D7	CX-ND7	SX-WND7	RC-ZAS04
NSX-T7	CX-NT7	SX-WNT19	

SERVICE MANUAL

S/M Code No. 09-995-407-1S2

SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM Tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<Amplifier section>

Mid-high frequency amplifier power output*	D7: 30 W + 30 W (200 Hz ~ 20 kHz, T.H.D less than 1 %, 6 ohms) T7: Rated: 33 W + 33 W (6 ohms, T.H.D 1 %, 1 kHz) Reference: 40 W + 40 W (6 ohms ,T.H.D 10%, 1 kHz)
Total harmonic distortion	0.1 % (17 W, 1 kHz, 6 ohms DIN AUDIO)
Low frequency amplifier power output*	D7: 120 W + 120 W (50 Hz ~ 200 Hz, THD less than 1 %, 6 ohms) T7: Rated: 120 W + 120 W (6 ohms. T.H.D 1 %, 75Hz) Reference: 155 W + 155 W (6 ohms , T.H.D 10 %, 75Hz)
Total harmonic distortion	D7: 0.1 % (110 W, 75 Hz, 6 ohms DIN AUDIO) **T7:** 0.1 % (100 W, 75 Hz, 6 ohms DIN AUDIO)

**without connectting to surround speakers*

Inputs	VIDEO/AUX: 300 mV (adjustable) MD: 300mV (adjustable) MIC1, MIC2: 1.0 mV (10 kohms)
Outputs	LINE OUT: 150 mV SPEAKERS HIGH FREQ: accept speakers of 6 ohms or more SPEAKERS LOW FREQ: accept speakers of 6 ohms or more SURROUND SPEAKERS: accept speakers of 8 to 16 ohms PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz –15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON, CrO_2 tape peak level)
Recording system	AC bias
Heads	Deck 1 : playback head x 1 Deck 2 : Recording/Playback/ erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	83 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX–WND7 (D7)>

Cabinet type	4 way, built-in subwoofer (magnetic shielded type)
Speakers	Subwoofer: 200 mm (7 $^{7}/_{8}$in.) cone type Woofer: 120 mm (4 $^{3}/_{4}$ in.) cone type Tweeter: 60 mm (2$^{3}/_{8}$ in.) cone type Super tweeter: 20 mm ($^{13}/_{16}$ in.) ceramic type
Impedance	6 ohms/6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	250 x 383 x 310 mm (9 $^{7}/_{8}$ x 15 $^{1}/_{8}$ x 12 $^{1}/_{4}$ in.)
Weight	7 kg (15 lbs 7 oz)

<Speaker system SX-WNT19 (T7)>

Cabinet type	4 way, built-in subwoofer (magnetic shielded type)
Speakers	Subwoofer: 200 mm (7 $^{7}/_{8}$in.) cone type Mid range: 100 mm (3 $^{15}/_{16}$ in.) cone type Tweeter: 60 mm (2$^{3}/_{8}$ in.) cone type Super tweeter: 20 mm ($^{13}/_{16}$ in.) ceramic type
Impedance	6 ohms/6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	260 x 464 x 305 mm (10 $^{1}/_{4}$ x 18 $^{3}/_{8}$ x 12 $^{1}/_{8}$ in.)
Weight	7.2 kg (15 lbs 14 oz)

<General>

Power requirements	D7: 120 V AC 60 Hz T7: 120 V/220-230V/240V (switchable) 50/60 Hz
Power consumption	D7: 200 W T7: 240 W
Dimensions of main unit (W x H x D)	300 x 383.5 x 380 mm (11$^{7}/_{8}$ x 15 $^{1}/_{8}$ x 15 in.)
Weight of main unit	13 kg (28 lbs 11 oz)

Standby power consumption
D7:
If the power economizing mode is OFF: 36 W<D7>
If the power economizing mode is OFF: 37W<T7>
If the power economizing mode is ON: 1.5 W

- Design and specifications are subject to change without notice.

- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol □□ are trademarks of Dolby Laboratories Licensing Corporation.

- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

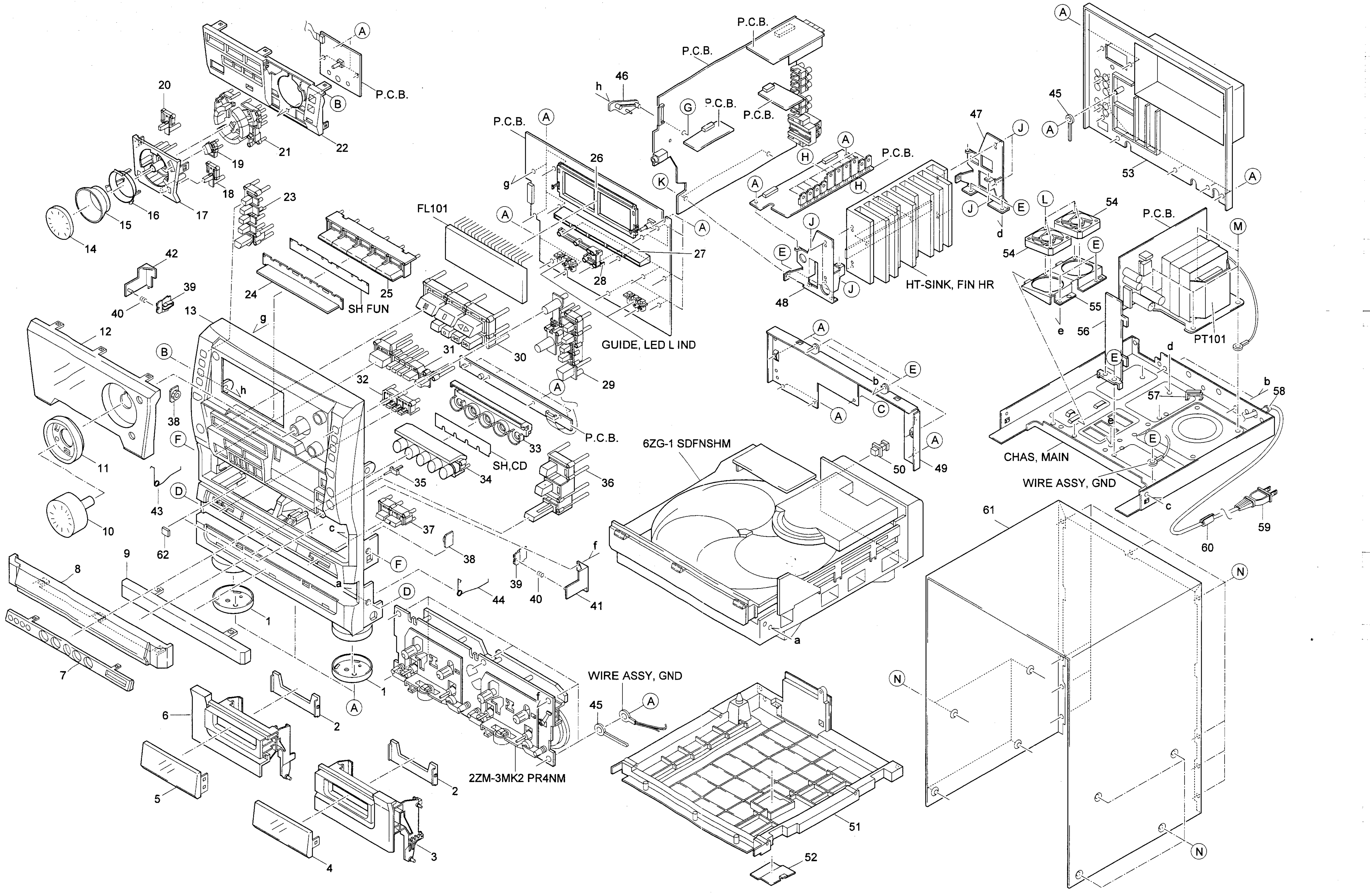
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
MAIN C.B			
⚠ PT1	8Z-NF4-601-010		PT,U ZNF-4<U>
⚠ PT1	8Z-NF4-602-010		PT,LH ZNF-4<LH>

SPEAKER (SX-WNT19) PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NS3-001-010		PANEL,FR
2	8Z-NS3-002-010		PANEL,TW L
3	8Z-NS3-003-010		PANEL,TW R
4	8Z-NS3-004-010		PANEL,DUCT
5	8Z-NS3-005-010		PANEL,DUCT RING
6	8Z-NS3-007-010		PANEL,TOP
7	8Z-NS3-008-010		GRILLE,FRAME ASSY
8	8Z-NS3-011-010		CABI,TOP L
9	8Z-NS3-012-110		CABI,TOP R
10	88-NS5-610-010		CORD,SPKR
11	88-NS5-611-010		CORD,SPKR B/L
12	8Z-NSY-608-010		SPKR, CERAMIC ASSY
13	8Z-NS3-604-010		SPKR,M 100
14	88-NS5-605-010		SPKR,T 60
15	88-NS3-602-110		SPKR,W 200

MECHANICAL EXPLODED VIEW 1 / 1



A
P.C.B.
B
20
21
22
19
18
23
17
16
15
14
42
39
40
13
12
B
38
h
g
24
25
SH FUN
FL101
P.C.B.
A
g
26
27
28
A
A
GUIDE, LED L IND
30
31
32
29
A
P.C.B.
33
SH,CD
34
35
36
37
38
39
40
41
f
44
F
11
43
D
10
62
c
F
D
a
8
9
1
7
1
A
6
2
5
2
4
3
2ZM-3MK2 PR4NM
f
45
WIRE ASSY, GND
A
h
46
P.C.B.
P.C.B.
G
P.C.B.
P.C.B.
H
K
A
P.C.B.
A
H
J
E
48
J
HT-SINK, FIN HR
47
J
J
E
d
A
45
A
53
A
L
54
54
E
55
e
56
P.C.B.
M
PT101
6ZG-1 SDFNSHM
A
E
b
C
A
A
49
50
a
E
d
57
b
58
e
E
CHAS, MAIN
WIRE ASSY, GND
c
59
60
61
N
N
N
51
52

MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-NF3-090-010		RING,FOOT
2	8Z-NF3-105-010		REFLECTOR,CASS
3	8Z-NF3-026-010		BOX,CASS R
4	8Z-NF3-056-010		WINDOW,CASS R
5	8Z-NF3-055-010		WINDOW,CASS L
6	8Z-NF3-025-010		BOX,CASS L
7	8Z-NF3-046-010		COVER, CD H
8	8Z-NF4-040-010		PANEL ASSY,TRAY
9	8Z-NF4-038-010		PANEL,CD
10	8Z-NF3-090-010		KNOB,RTRY MAIN
11	8Z-NF3-095-010		RING,MAIN
12	8Z-NF3-050-010		WINDOW,DISP
13	8Z-NF3-001-010		CABI,FR H<LH>
13	8Z-NF3-002-010		CABI,FR U<U>
14	8Z-NF3-091-010		KNOB,RTRY JOG
15	8Z-NF3-096-010		RING,JOG
16	8Z-NF3-107-010		REFLECTOR,JOG
17	8Z-NF3-039-010		PANEL,JOG
18	8Z-NF3-075-010		KEY,TIMER
19	8Z-NF3-077-010		KEY,ENTER
20	8Z-NF3-076-010		KEY,CLOCK
21	8Z-NF3-074-010		KEY,JOG
22	8Z-NF4-030-010		PANEL,FR<LH>
22	8Z-NF4-031-010		PANEL,FR U<U>
23	8Z-NF3-060-010		KEY,GEQ
24	8Z-NF3-106-010		REFLECTOR,FUN
25	8Z-NF3-062-010		KEY,FUN
26	8Z-NF3-210-010		GUIDE,FL
27	8Z-NF3-211-010		GUIDE,LED FUN
28	8Z-NF3-212-010		GUIDE,LED OPE
29	8Z-NF3-061-010		KEY,DSP
30	8Z-NF3-063-010		KEY ASSY,OPE
31	8Z-NF3-072-010		KEY,KARAOKE
32	8Z-NF3-078-010		KEY,CD
33	8Z-NF3-213-010		GUIDE,LED DIRECT
34	8Z-NF3-079-010		KEY,DIRECT
35	8Z-NF3-108-010		REFLECTOR,ECO
36	8Z-NF3-073-010		KEY,BBE
37	8Z-NF3-080-010		KEY,OPEN
38	87-NF8-220-010		DMPR,150
39	82-NF5-229-010		PLATE,LOCK
40	86-NF9-224-010		SPR-C,LOCK
41	87-NF4-217-110		HLDR,LOCK 2
42	87-NF4-216-010		HLDR,LOCK 1
43	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
44	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
45	87-064-185-010		HLDR,WIRE
46	88-NF5-208-010		HLDR,PWB-M N
47	8Z-NF3-224-010		HLDR,HT-SINK 1
48	8Z-NF3-228-010		HLDR,HT-SINK R
49	8Z-NF3-029-010		PANEL,REAR
50	84-ZG1-245-210		CAP,OPTICAL
51	8Z-NF3-024-010		CABI,BOTTOM
52	8Z-NF3-048-010		COVER, BOTTOM
53	8Z-NF4-012-010		CABI,REAR LHSTNM<LH>
53	8Z-NF4-010-010		CABI,REAR USTNM<U>
54	87-A91-080-010		FAN, F614R-12MC-19-400MM
55	8Z-NF3-229-010		HLDR,FAN 4CH
56	8Z-NF3-227-010		HLDR,PWB PT
57	87-NF4-221-010		HLDR,CABLE
58	87-085-185-010		BUSHING, AC CORD (E)<LH>
58	87-085-189-010		BUSHING, AC CORD (U) CM-22C<U>
⚠ 59	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI<LH>
⚠ 59	87-A80-110-010		AC CORD ASSY,U SPT-2W<U>
60	87-A90-562-010		F-BEAD,9.5-17.5-28.5 BRH
61	8Z-NF3-009-010		CABI,STEEL
62	81-532-080-010		LABEL, CASS. COMPT
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-721-096-410		TAPPING SCREW, QT2+3-10
C	87-067-581-010		TAPPING SCREW, BVT2+3-15
D	87-721-097-410		QT2+3-12 GLD
E	87-067-688-010		BVTT+3-6
F	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)
G	87-067-579-010		TAPPING SCREW, BVT2+3-8
H	87-067-680-010		BVI T3+3-10
J	87-067-584-010		TAPPING SCREW, BVT2+3-6
K	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
L	87-067-698-010		TAPPING SCREW, BVT2+3-18
M	87-067-975-010		S-SCREW,IT+4-8
N	87-067-641-010		UTT2+3-8(W/O SLOT)BL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

▶

サービス技術ニュース	
番号	連絡内容
G−　　−	
G−　　−	
G−　　−	

アイワ株式会社
AIWA CO.,LTD.

9620450, 9630472

Tokyo Japan

〒110-8710 東京都台東区池之端1-2-11 ☎03（3827）3111（代表）

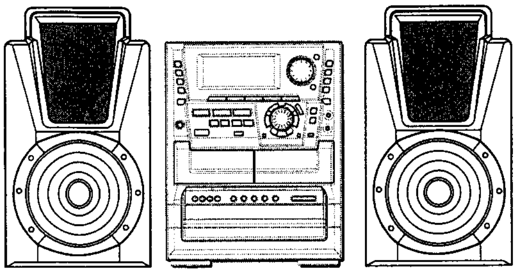
Printed in Singapore

353.1

aiwa

aiwa
SERVICE

NSX-D7
NSX-T7



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM: 2ZM-3MK2 PR4NM
- BASIC CD MECHANISM: 6ZG-1 SDFNSHM
- TYPE: U(D7),LH(T7)

SERVICE MANUAL

CORRECTION

WRONG

- This Service Manual contains information about the difference between NSX-D7/T7<U,LH>. If requiring the other information, see Service Manual of NSX-D9/T9 (S/M Code No. 09-993-407-1T1).

CORRECT

- This Service Manual contains information about the difference between NSX-D7/T7<U,LH> and NSX-D9/T9<U,LH>. If requiring the other information, see Service Manual of NSX-D9/T9 (S/M Code No. 09-993-407-1R1).

- The Correction Service Manual is issued because of some errors in Service Manual of MODEL NAME NSX-D7/T7. (S/M Code No. 09-995-407-1S2).

S/M Code No. 09-996-407-1C1

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
PT C.B			
⚠ PT1	8Z-NF4-601-010		PT,U ZNF-4<U>
⚠ PT1	8Z-NF4-602-010		PT,LH ZNF-4<LH>

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NF4-901-010		IB,U (ESF)M<U>
1	8Z-NF4-902-010		IB,LH(ESP)M<LH>

サービス技術ニュース	
番号	連絡内容
G—　—	
G—　—	
G—　—	

アイワ株式会社
AIWA CO.,LTD.

9620450

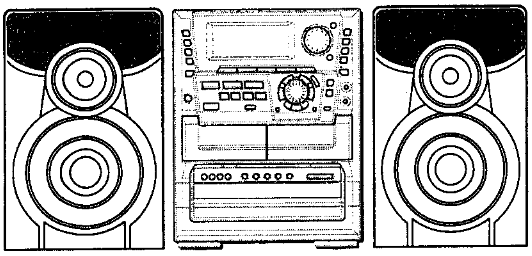
Tokyo Japan

〒110-8710 東京都台東区池之端1-2-11 ☎03（3827）3111（代表）

Printed in Singapore

AIWA -03461

NSX-D9
NSX-T9



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM: 2ZM-3MK2 PR4NM
- BASIC CD MECHANISM: 6ZG-1 SDFNSHM
- TYPE: D9<U>,T9<LH,HR,HA>

SERVICE MANUAL

REVISION PUBLISHING

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX–D9	CX–ND9	SX–WND7 SX–R275	RC–ZAS04
NSX–T9	CX–NT9	SX–WNT9	

- This Service Manual is the "Revision Publishing" and replaces Simple Manual NSX-D9/T9 (S/M Code No. 09-991-407-1T1<U,LH,HR>) and (S/M Code No. 09-993-407-1T2<HA>) .
- If requiring information about the CD mechanism, see Service Manual of 6ZG-1 (S/M Code No.09-994-326-2N2).

S/M Code No. 09–993–407–1R1

TABLE OF CONTENTS

SPECIFICATIONS 3
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING 4
PRECAUTION TO REPLACE OPTICAL BLOCK 4
NOTE ON BEFORE STARTING REPAIR 5, 6
ELECTRICAL MAIN PARTS LIST .... 7 ~ 12
TRANSISTOR ILLUSTRATION 13
IC BLOCK DIAGRAM – 1 14
BLOCK DIAGRAM – 1 (TUNER: HR) 15
BLOCK DIAGRAM – 2 (TUNER: U,LH,HA) 16
BLOCK DIAGRAM – 3 (MAIN / FRONT) .... 17 ~ 19
SCHEMATIC DIAGRAM – 1 (MAIN 1 / 2 : AMP) .... 20 ~ 22
WIRING – 1 (MAIN) 23, 24
IC BLOCK DIAGRAM – 2 .... 25, 26
SCHEMATIC DIAGRAM – 2 (MAIN 2 / 2 : DECK) 27, 28
WIRING – 2 (FRONT) 29, 30
SCHEMATIC DIAGRAM – 3 (FRONT) .... 31 ~ 33
IC BLOCK DIAGRAM – 3 .... 34 ~ 36
SCHEMATIC DIAGRAM – 4 (TUNER: HR) 35, 36
WIRING – 3 (TUNER: HR) 37, 38
WIRING – 4 (TUNER: U,LH,HA) 39, 40
SCHEMATIC DIAGRAM – 5 (TUNER: U,LH,HA) 41, 42
WIRING – 5 (PRO) 43, 44
SCHEMATIC DIAGRAM – 6 (PRO) 45, 46
WIRING – 6 (PT: LH,HR,HA) 47
WIRING – 7 (PT: U) 48
SCHEMATIC DIAGRAM – 7 (PT: LH,HR,HA) 49
SCHEMATIC DIAGRAM – 8 (PT: U) 50
WIRING – 8 (GEQ/KEY CON/KEY/JOG) 51, 52
SCHEMATIC DIAGRAM – 9 (GEQ) 53
SCHEMATIC DIAGRAM – 10 (KEY CON: HR) 54
IC BLOCK DIAGRAM – 4 55
WIRING – 9 (DECK) 56
FL GRID ASSIGNMENT & ANODE CONNECTION 57, 58
IC DESCRIPTION .... 59 ~ 61
ADJUSTMENT <TUNER / DECK> .... 62 ~ 65
PRACTICAL SERVICE FIGURE 66
MECHANICAL EXPLODED VIEW 1 / 1 .... 67, 68
MECHANICAL PARTS LIST 1 / 1 69
TAPE MECHANISM EXPLODED VIEW 1 / 1 .... 70, 71
TAPE MECHANISM PARTS LIST 1 / 1 72
SPRING APPLICATION POSITION 73
SPEAKER DISASSEMBLY INSTRUCTIONS 74
SPEAKER PARTS LIST 75
ACCESSORIES / PACKAGE LIST 75
REFERENCE NAME LIST 76

SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM(MW) Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 uV/m
Antenna	Loop antenna

<SW Tuner section> (T9HR)

Tuning range	5.9 MHz to 17.9 MHz
Antenna	Wire antenna

<Amplifier section>

Mid-high frequency amplifier	
Power output*	D9U : 30 W + 30 W (200 Hz-20 kHz, THD less than 1%, 6 ohms) T9LH,HR,HA : Rated: 33 W + 33 W (6 ohms, THD 1 %,1 kHz) Reference: 40 W + 40 W (6 ohms, THD 10 %,1 kHz)
Total harmonic distortion	0.1 % (17 W, 1 kHz, 6 ohms, DIN AUDIO)
Low frequency amplifier	
Power output*	D9U : 140 W + 140 W (50Hz-200Hz, THD less than 1%, 6 ohms) T9LH,HR,HA : Rated: 145 W + 145 W (6 ohms, THD 1 %,75 Hz) Reference: 185 W + 185 W (6 ohms, THD 10 %,75 Hz)
Total harmonic distortion	0.1 % (110 W,75 Hz,6 ohms, DIN AUDIO)

* without connecting to surround speakers

Inputs	VIDEO/AUX : 300 mV (adjustable) MD : 300 mV (adjustable) MIC1,MIC2 : 1.0 mV (10 kohms) LINE OUT : 150 mV
Outputs	SPEAKERS HIGH FREQ : accept speakers of 6 ohms or more SPEAKERS LOW FREQ : accept speakers of 6 ohms or more SURROUND SPEAKERS : accept speakers of 8 to 16 ohms PHONES (stereo jack) : accepts \headphones of 32 ohms or more

<Cassette deck section>

Track format	\4 tracks, 2 channels stereo
Frequency response	\CrO2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal to noise ratio	60dB (Dolby B NR ON, CrO2 tape peak level)
Recording system	AC bias
Heads	Deck 1: Playback head x 1 Deck 2: Recording/Playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	83 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX–WND7: D9U>

Cabinet type	4 way, built-in subwoofer (magnetic shielded type)
Speakers	Subwoofer : 200 mm ($7^{7}/_{8}$ in.) cone type Woofer : 120 mm ($4^{3}/_{4}$ in.) cone type Tweeter : 60 mm ($2^{3}/_{8}$ in.) cone type Super Tweeter : 20 mm ($^{13}/_{16}$ in.) ceramic type
Impedance	6 ohms / 6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	250 x 383 x 310 mm ($9^{7}/_{8}$ x $15^{1}/_{8}$ x $12^{1}/_{4}$ in.)
Weight	7.0 kg (15 lbs. 7 oz)

<Speaker system SX–WNT9: T9LH,HR,HA>

Cabinet type	4 way, built-in subwoofer (magnetic shielded type)
Speakers	Subwoofer : 200 mm ($7^{7}/_{8}$ in.) cone type Mid range: 100 mm ($3^{15}/_{16}$ in.) cone type Tweeter : 60 mm ($2^{3}/_{8}$ in.) cone type Super Tweeter : 20 mm ($^{13}/_{16}$ in.) ceramic type
Impedance	6 ohms / 6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	260 x 464 x 305 mm ($10^{1}/_{4}$ x $18^{3}/_{8}$ x $12^{1}/_{8}$ in.)
Weight	7.2 kg (15 lbs. 14 oz)

<General>

Power requirements	D9U: 120 V AC, 60 Hz T9LH,HR,HA: 120 V/220-230 V/240 V (switchable)50/60Hz
Power consumption	D9U : 210 W T9LH,HR,HA : 250 W
Dimensions of main unit	300 x 383.5 x 380 mm ($11^{7}/_{8}$ x $15^{1}/_{8}$ x 15 in.)
Weight of main unit	13 kg (28 lbs.11 oz)

Standby power consumption

If the power-economizing mode is OFF: 35 W
If the power-economizing mode is ON: 1.5 W

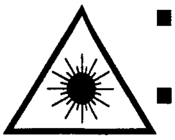
- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

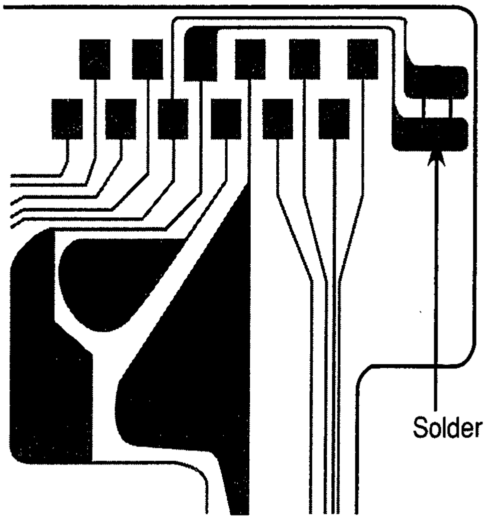
Precaution to replace Optical block

(KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure to ground body and workbench, and ensure clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK – UP Assy P.C.B.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, the secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connector the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased 1 V or less using a multimeter or an oscilloscope.

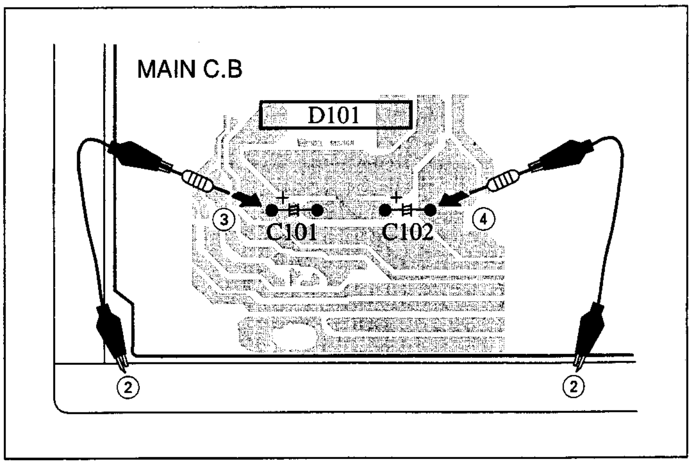


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitor on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgment of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

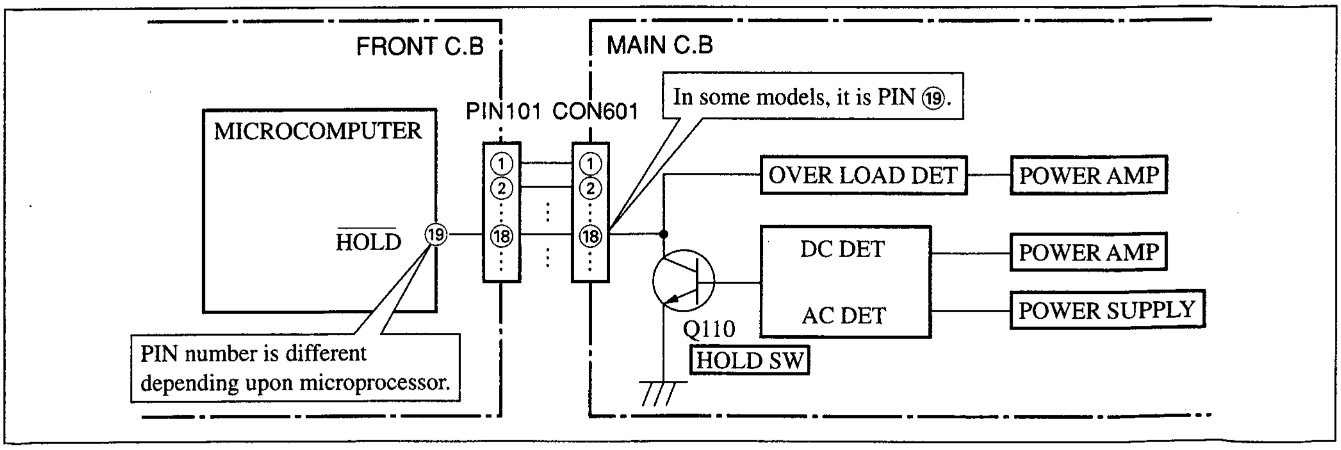


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.

When the above described phenomenon occurs, it can leads to wrong judgment as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

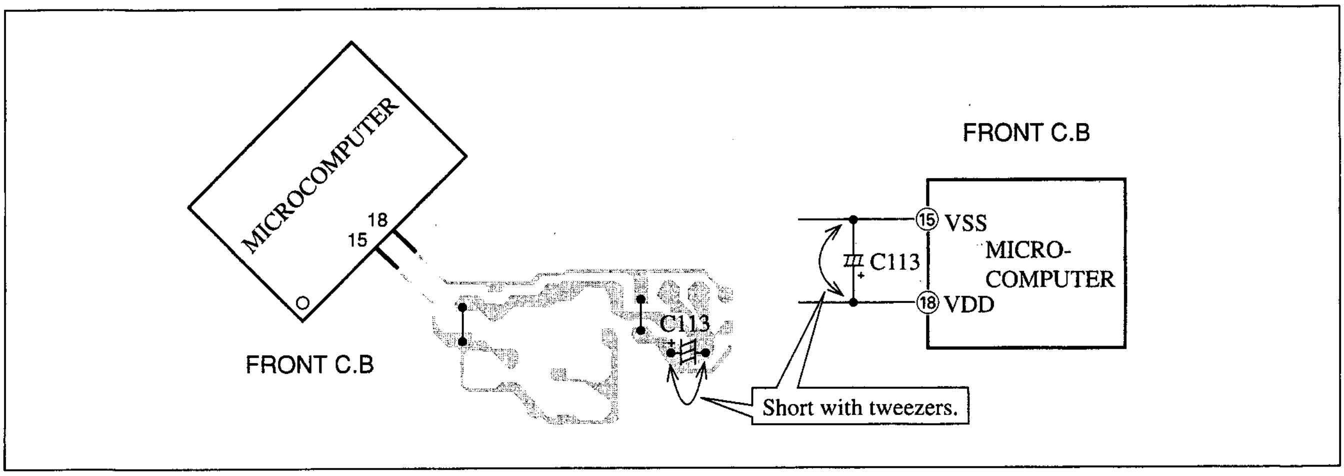


Fig-2-2

② Short the both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.

③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8Z-NF3-605-010		C-IC,LC876580W-5K75
	87-A20-914-010		IC,SPS-442-1-F
	87-A20-355-010		IC,CXA1553P
	87-A20-783-040		C-IC,BA7762AFS
	87-A21-023-040		C-IC,BA3835F
	87-A21-022-040		C-IC,BA3880FS
	87-A21-021-040		C-IC,BU2099FV
	87-A21-031-040		C-IC,BU4551BF
	87-A20-561-040		C-IC,M65847AFP<HR>
	87-A21-202-040		C-IC,M62445AFP
	87-A20-613-040		C-IC,BU9262AFS
	87-A21-051-040		C-IC,BU9990-03FS
	87-A20-869-040		C-IC,M62449FP
	87-070-127-110		IC,LC72131 D
	87-A20-913-010		IC,LA1837NL
TRANSISTOR			
	87-A30-218-080		TR,2SB1237Q
	87-A30-217-010		TR,2SB1436(R)<HR>
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-075-080		C-TR,2SA1235F
	87-A30-196-080		TR,2SC4115SRS
	87-A30-240-080		TR,CSA1585BC
	87-026-609-080		TR,KTA1266GR
	87-A30-087-080		C-FET,2SK2158
	87-A30-257-080		C-TR,2SD1306E
	89-213-702-010		TR,2SB1370 (E)
	87-026-245-080		TR,DTC114ES
	87-A30-198-080		TR,KTC3199GR
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-268-040		C-TR,2SA1514K(S)
	87-A30-190-080		TR,CC5551
	87-A30-205-010		TR,2SB1588
	87-A30-204-010		TR,2SD2439
	87-A30-106-070		C-TR,CMBT5551
	87-A30-276-040		C-TR,DTA143EKA
	87-A30-214-010		TR,2SB1344
	87-A30-215-010		TR,2SD2025
	87-A30-105-080		C-TR,RT1P 441C
	87-A30-186-010		FET,2SK3053
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-142-040		C-TR,DTA123EKA
	87-A30-067-080		C-TR,2SA1298Y
	89-503-602-080		C-FET,2SK360E<HR>
	89-327-143-080		C-TR,2SC2714O
	87-A30-086-070		C-TR,CSD1306E<HR>
DIODE			
	87-A40-224-010		DIODE,GBU8D
	87-A40-553-080		DIODE,1N4003 LES
	87-A40-503-080		ZENER,MTZJ39B
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-A40-004-080		ZENER,MTZJ16A
	87-070-274-080		DIODE,1N4003 SEM
	87-017-447-010		DIODE,GBU4DL
	87-017-654-060		DIODE,GBU6J
	87-A40-440-080		ZENER,MTZJ7.5A
	87-A40-488-080		DIODE,1SS244
	87-020-331-080		CHIP-DIODE,DAN202K
	87-017-932-080		ZENER,MTJ6.2B
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-620-080		ZENER,MTZJ6.2A
	87-A40-646-010		DIODE,FMB-G16L
	87-A40-002-080		ZENER,MTZJ5.1C
	87-A40-438-080		ZENER,MTZJ4.7A
	87-A40-234-080		ZENER,MTZJ5.6A
	87-A40-392-010		DIODE,1N5818
	87-017-931-080		ZENER,MTZJ5.6B
	87-017-149-080		ZENER,HZS6A2L<HR>
MAIN C.B			
	88-906-481-110		FF-CABLE, 6P 1.25 480MM
C1	87-012-369-080		C-CAP,S 0.047-50F
C2	87-012-369-080		C-CAP,S 0.047-50F
C3	87-012-368-080		C-CAP,S 0.1-50 F
C4	87-012-368-080		C-CAP,S 0.1-50 F
C5	87-012-368-080		C-CAP,S 0.1-50 F
C6	87-012-368-080		C-CAP,S 0.1-50 F
C9	87-016-658-090		CAP,E 4700-35 SMG
C10	87-016-658-090		CAP,E 4700-35 SMG
C21	87-010-385-080		CAP, ELECT 220-25V
C22	87-010-385-080		CAP, ELECT 220-25V
C23	87-010-247-080		CAP, ELECT 100-50V
C24	87-010-247-080		CAP, ELECT 100-50V
C25	87-010-430-080		CAP, ELECT 100-63V
C26	87-010-263-080		CAP, ELECT 100-10V
C27	87-012-140-080		CAP 470P
C28	87-010-263-080		CAP, ELECT 100-10V<U>
C29	87-010-247-080		CAP, ELECT 100-50V
C30	87-010-112-080		CAP, ELECT 100-16V
C31	87-010-235-080		CAP,E 470-16 SME
C61	87-010-234-080		CAP 47-16
C62	87-010-415-080		CAP ELE SRE 10-50V
C91	87-010-401-080		CAP, ELECT 1-50V
C92	87-010-263-080		CAP, ELECT 100-10V
C93	87-010-380-080		CAP, ELECT 47-16V
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-010-182-080		C-CAP,S 2200P-50 B
C125	87-012-368-080		C-CAP,S 0.1-50 F
C126	87-012-368-080		C-CAP,S 0.1-50 F
C127	87-012-368-080		C-CAP,S 0.1-50 F
C128	87-012-368-080		C-CAP,S 0.1-50 F
C134	87-010-498-080		CAP,E 10-16 GAS
C203	87-010-178-080		CHIP CAP 1000P
C204	87-010-178-080		CHIP CAP 1000P
C229	87-010-993-080		C-CAP,S 0.056-25 B
C230	87-010-993-080		C-CAP,S 0.056-25 B
C231	87-010-196-080		CHIP CAPACITOR,0.1-25
C232	87-010-196-080		CHIP CAPACITOR,0.1-25
C235	87-016-285-080		CAP,E 47-100SME
C236	87-016-285-080		CAP,E 47-100SME
C239	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-010-318-080		C-CAP,S 47P-50 CH
C302	87-010-318-080		C-CAP,S 47P-50 CH
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C305	87-012-145-080		CAP, CHIP S 270P CH
C306	87-012-145-080		CAP, CHIP S 270P CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C313	87-010-180-080		C-CER 1500P
C314	87-010-180-080		C-CER 1500P
C315	87-010-179-080		CAP,CHIP S B1200P
C316	87-010-179-080		CAP,CHIP S B1200P
C317	87-012-142-080		CAP, S 0.33-16
C318	87-012-142-080		CAP, S 0.33-16
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C321	87-012-142-080		CAP, S 0.33-16

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C322	87-012-142-080		CAP, S 0.33-16
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P
C355	87-012-349-080		C-CAP,S 1000P-50 CH
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		CAP, CHIP 0.01 DM
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B
C360	87-010-183-080		C-CAP,S 2700P-50 B
C363	87-A10-772-080		CAP,M 5600P-50 J
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C371	87-010-175-080		CAP 560P
C372	87-010-175-080		CAP 560P
C373	87-010-179-080		CAP,CHIP S B1200P
C374	87-010-179-080		CAP,CHIP S B1200P
C375	87-010-545-080		CAP, ELECT 0.22-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C381	87-010-197-080		CAP, CHIP 0.01 DM
C382	87-010-318-080		C-CAP,S 47P-50 CH
C383	87-010-197-080		CAP, CHIP 0.01 DM
C384	87-010-402-080		CAP, ELECT 2.2-50V
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C388	87-012-156-080		C-CAP,S 220P-50 CH
C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C402	87-010-260-080		CAP, ELECT 47-25V
C403	87-010-404-080		CAP, ELECT 4.7-50V
C404	87-010-404-080		CAP, ELECT 4.7-50V
C405	87-010-404-080		CAP, ELECT 4.7-50V
C406	87-010-404-080		CAP, ELECT 4.7-50V
C407	87-010-188-080		CAP,CHIP 6800P
C408	87-010-188-080		CAP,CHIP 6800P
C409	87-012-140-080		CAP 470P
C410	87-012-140-080		CAP 470P
C411	87-010-404-080		CAP, ELECT 4.7-50V
C412	87-010-404-080		CAP, ELECT 4.7-50V
C413	87-010-404-080		CAP, ELECT 4.7-50V
C414	87-010-404-080		CAP, ELECT 4.7-50V
C415	87-010-197-080		CAP, CHIP 0.01 DM
C416	87-010-197-080		CAP, CHIP 0.01 DM
C417	87-010-956-080		CHIP-CAP,S 0.068-25B
C418	87-010-956-080		CHIP-CAP,S 0.068-25B
C419	87-010-260-080		CAP, ELECT 47-25V
C451	87-010-404-080		CAP, ELECT 4.7-50V
C452	87-010-404-080		CAP, ELECT 4.7-50V
C453	87-010-400-080		CAP, ELECT 0.47-50V
C454	87-010-400-080		CAP, ELECT 0.47-50V
C457	87-010-196-080		CHIP CAPACITOR,0.1-25
C458	87-010-196-080		CHIP CAPACITOR,0.1-25
C461	87-010-067-080		CAP,E 0.1-50 5L
C463	87-010-546-080		CAP, ELECT 0.33-50V
C464	87-010-546-080		CAP, ELECT 0.33-50V
C465	87-A11-006-080		CAP,M 0.033-50 J DE
C466	87-A11-006-080		CAP,M 0.033-50 J DE
C601	87-010-183-080		C-CAP,S 2700P-50 B
C602	87-010-183-080		C-CAP,S 2700P-50 B
C605	87-010-318-080		C-CAP,S 47P-50 CH
C606	87-010-318-080		C-CAP,S 47P-50 CH
C607	87-010-318-080		C-CAP,S 47P-50 CH
C608	87-010-318-080		C-CAP,S 47P-50 CH
C613	87-016-081-080		C-CAP,S 0.1-16 RK
C614	87-016-081-080		C-CAP,S 0.1-16 RK
C615	87-A11-011-080		CAP,M 0.12-50 J DE
C616	87-A11-011-080		CAP,M 0.12-50 J DE
C617	87-A11-009-080		CAP,M 0.068-50 J DE
C618	87-A11-009-080		CAP,M 0.068-50 J DE
C619	87-010-185-080		C-CAP,S 3900P-50 B
C620	87-010-185-080		C-CAP,S 3900P-50 B
C621	87-010-401-080		CAP, ELECT 1-50V
C622	87-010-401-080		CAP, ELECT 1-50V
C623	87-A10-773-080		CAP,M 0.10-50 J
C624	87-A10-773-080		CAP,M 0.10-50 J
C625	87-010-405-080		CAP, ELECT 10-50V
C626	87-010-405-080		CAP, ELECT 10-50V
C627	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,U,HA>
C629	87-010-405-080		CAP, ELECT 10-50V
C630	87-010-213-080		C-CAP,S 0.015-50 B
C631	87-010-992-080		C-CAP,S 0.047-25 B
C632	87-010-263-080		CAP, ELECT 100-10V
C633	87-010-263-080		CAP, ELECT 100-10V
C634	87-010-196-080		CHIP CAPACITOR,0.1-25
C635	87-010-196-080		CHIP CAPACITOR,0.1-25
C636	87-010-992-080		C-CAP,S 0.047-25 B
C637	87-010-183-080		C-CAP,S 2700P-50 B
C640	87-010-314-080		C-CAP,S 22P-50V
C641	87-010-196-080		CHIP CAPACITOR,0.1-25
C653	87-010-322-080		C-CAP,S 100P-50 CH
C654	87-010-322-080		C-CAP,S 100P-50 CH
C677	87-010-196-080		CHIP CAPACITOR,0.1-25
C699	87-018-131-080		CAP,TC U 1000P-50 K B<U>
C701	87-010-263-080		CAP, ELECT 100-10V
C702	87-010-196-080		CHIP CAPACITOR,0.1-25
C703	87-010-319-080		C-CAP,S 56P-50 CH
C704	87-010-319-080		C-CAP,S 56P-50 CH
C705	87-012-393-080		C-CAP,S 0.22-16 R K
C706	87-010-197-080		CAP, CHIP 0.01 DM
C707	87-010-180-080		C-CER 1500P
C708	87-010-213-080		C-CAP,S 0.015-50 B
C709	87-010-213-080		C-CAP,S 0.015-50 B
C710	87-010-197-080		CAP, CHIP 0.01 DM
C711	87-010-181-080		CAP,CHIP S 1800P
C712	87-010-196-080		CHIP CAPACITOR,0.1-25
C713	87-010-544-080		CAP, ELECT 0.1-50V
C714	87-010-374-080		CAP, ELECT 47-10V
C715	87-010-071-080		CAP, ELECT 1-50 M 5L SRE
C716	87-010-071-080		CAP, ELECT 1-50 M 5L SRE
C717	87-010-183-080		C-CAP,S 2700P-50 B
C718	87-010-183-080		C-CAP,S 2700P-50 B
C719	87-A11-014-080		CAP,M 0.22-50 J DE
C731	87-010-560-080		CAP,E 10-50 GAS
C732	87-010-196-080		CHIP CAPACITOR,0.1-25
C733	87-010-958-080		CHIP -CAP,S 0.01-25BJ
C734	87-012-156-080		C-CAP,S 220P-50 CH
C735	87-010-178-080		CHIP CAP 1000P
C736	87-010-196-080		CHIP CAPACITOR,0.1-25
C741	87-010-178-080		CHIP CAP 1000P
CN1	87-A60-739-010		CONN,13P JL-BT
CN91	87-A60-109-010		CONN,2P V S2M-2W
CN92	87-A60-109-010		CONN,2P V S2M-2W
CN201	87-A60-739-010		CONN,13P JL-BT
CN301	87-099-827-010		CONN,3P S2M-3W
CN351	87-099-832-010		CONN,8P S2M-8W
CN502	87-099-566-010		CONN,7P TUC-P7P-B1<HR>
CN601	87-099-719-010		CONN,30P TYK-B(X)
CN602	87-A60-061-010		CONN,06P V 9604S-06C
CN604	87-099-570-010		CONN,13P TUC-P13P-B1
CN901	87-099-568-010		CONN,11P TUC-P11P-B1
CNA1	8Z-NF3-645-010		CONN ASSY,9P VH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
J201	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
J206	87-A60-750-010		JACK,PIN 4P R/W BLUE
J601	87-A60-426-010		JACK,PIN 6P YKC21-3835
JR630	83-XM1-617-080		C-COIL,BK2125HM601<U>
JW16	87-A90-896-080		F-BEAD,035600STY7
JW112	87-A90-896-080		F-BEAD,035600STY7
L101	87-003-383-010		COIL,1UH-S
L102	87-003-383-010		COIL,1UH-S
L201	87-003-383-010		COIL,1UH-S
L202	87-003-383-010		COIL,1UH-S
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L701	87-005-448-080		COIL 220UH,K
R20	87-A00-261-080		RES,M/F 0.56-1W J<U>
R143	87-A00-443-050		RES,390-1/2W J RP
R144	87-A00-443-050		RES,390-1/2W J RP
R145	87-A00-443-050		RES,390-1/2W J RP
R146	87-A00-443-050		RES,390-1/2W J RP
RY201	87-045-382-010		RELAY,OUAZ-SH-112L
SFR301	87-024-355-080		SFR,33K DIA6 H
SFR302	87-024-355-080		SFR,33K DIA6 H
SFR303	87-024-355-080		SFR,33K DIA6 H
SFR304	87-024-355-080		SFR,33K DIA6 H
SFR305	87-024-356-080		SFR,47K DIA6 H
SFR306	87-024-356-080		SFR,47K DIA6 H
SFR351	87-024-356-080		SFR,47K DIA6 H
SFR352	87-024-356-080		SFR,47K DIA6 H
WH1	87-A90-510-010		HLDR,WIRE 2.5-9P

FRONT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	8Z-NF3-646-010		CABLE,FFC 15P-CD
	88-915-161-110		FF-CABLE, 15P 1.25
	88-908-181-110		FF-CABLE, 8P 1.25 180MM
	88-909-381-110		FF-CABLE,9P 1.25
C104	87-010-313-080		CAP, CHIP 18P
C105	87-010-322-080		C-CAP,S 100P-50 CH
C106	87-012-145-080		CAP, CHIP S 270P CH
C107	87-012-157-080		C-CAP,S 330P-50 CH
C108	87-015-681-040		E/CAP 10-16
C110	87-010-180-080		C-CER 1500P
C112	87-010-196-080		CHIP CAPACITOR,0.1-25
C113	87-A10-189-040		CAP,E 220-10
C114	87-010-196-080		CHIP CAPACITOR,0.1-25
C115	87-010-198-080		CAP, CHIP 0.022
C116	87-010-493-040		CAP,E 0.47-50 GAS
C117	87-010-498-040		CAP,E 10-16 GAS
C118	87-010-194-080		CAP, CHIP 0.047
C119	87-A10-586-040		CAP,E 47-35 7L SR
C120	87-015-699-040		CAP,E 10-50 7L
C121	87-015-699-040		CAP,E 10-50 7L
C122	87-010-197-080		CAP, CHIP 0.01 DM
C123	87-010-196-080		CHIP CAPACITOR,0.1-25
C125	87-010-196-080		CHIP CAPACITOR,0.1-25
C128	87-010-178-080		CHIP CAP 1000P
C129	87-010-194-080		CAP, CHIP 0.047
C130	87-010-264-040		CAP,E 100-10 5L
C150	87-010-194-080		CAP, CHIP 0.047
C151	87-010-194-080		CAP, CHIP 0.047
C161	87-010-197-080		CAP, CHIP 0.01 DM
C162	87-010-182-080		C-CAP,S 2200P-50 B
C171	87-010-196-080		CHIP CAPACITOR,0.1-25
C196	87-010-194-080		CAP, CHIP 0.047
C197	87-010-194-080		CAP, CHIP 0.047
C213	87-A10-189-040		CAP,E 220-10
C351	87-012-158-080		C-CAP,S 390P-50 CH
C352	87-010-196-080		CHIP CAPACITOR,0.1-25
C353	87-010-196-080		CHIP CAPACITOR,0.1-25
C354	87-010-196-080		CHIP CAPACITOR,0.1-25
C355	87-010-196-080		CHIP CAPACITOR,0.1-25
C356	87-010-196-080		CHIP CAPACITOR,0.1-25
C357	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C407	87-010-322-080		C-CAP,S 100P-50 CH
C410	87-010-196-080		CHIP CAPACITOR,0.1-25
C417	87-010-322-080		C-CAP,S 100P-50 CH
C601	87-010-196-080		CHIP CAPACITOR,0.1-25
C602	87-010-186-080		CAP,CHIP 4700P
C603	87-010-112-040		CAP,E 100-16
C604	87-010-405-040		CAP,E 10-50
C605	87-010-546-040		CAP,E 0.33-50
C606	87-010-320-080		CHIP CAP 68P
C607	87-010-197-080		CAP, CHIP 0.01 DM
C701	87-010-981-040		CAP,E 22-35 5L SRE
C801	87-012-156-080		C-CAP,S 220P-50 CH
C802	87-010-176-080		C-CAP,S 680P-50 SL
C803	87-010-187-080		CAP CHIP S5600P
C804	87-010-213-080		C-CAP,S 0.015-50 B
C806	87-010-071-040		CAP,E 1-50 M 5L SRE
C807	87-010-196-080		CHIP CAPACITOR,0.1-25
C809	87-012-155-080		C-CAP 180P-50CH
C810	87-010-561-040		CAP,E 100-16 GAS
C811	87-015-682-040		CAP,E 22-16 7L
C812	87-010-060-040		CAP,E 100-16
C821	87-010-197-080		CAP, CHIP 0.01 DM
C822	87-015-819-080		CAPACITOR,0.01
C823	87-010-197-080		CAP, CHIP 0.01 DM
C833	87-010-322-080		C-CAP,S 100P-50 CH
C901	87-012-157-080		C-CAP,S 330P-50 CH
C902	87-010-176-080		C-CAP,S 680P-50 SL
C903	87-010-176-080		C-CAP,S 680P-50 SL
C904	87-010-176-080		C-CAP,S 680P-50 SL
C905	87-010-176-080		C-CAP,S 680P-50 SL
C906	87-010-176-080		C-CAP,S 680P-50 SL
C907	87-010-176-080		C-CAP,S 680P-50 SL
C908	87-010-176-080		C-CAP,S 680P-50 SL
C909	87-010-176-080		C-CAP,S 680P-50 SL
C910	87-010-176-080		C-CAP,S 680P-50 SL
C911	87-010-176-080		C-CAP,S 680P-50 SL
C912	87-010-176-080		C-CAP,S 680P-50 SL
C913	87-010-176-080		C-CAP,S 680P-50 SL
C970	87-010-318-080		C-CAP,S 47P-50 J CH<HR,U>
C971	87-010-318-080		C-CAP,S 47P-50 J CH<HR,U>
CN101	87-099-720-010		CONN,30P TYK-B(P)
CN102	87-099-032-010		CONN,15P 6216 H
CN302	87-A60-078-010		CONN,09P H 9604S-09F
CN502	87-A60-059-010		CONN,08P V 9604S-08C
CN701	87-099-750-010		CONN,15P V 9604SC
FL101	8Z-NF3-611-010		FL,BJ680GK-ZNF3
J601	87-A60-651-010		JACK,3.5MONO
J602	87-A60-651-010		JACK,3.5MONO
JR125	83-XM1-617-080		C-COIL,BK2125 HM601<HR>
L101	87-A50-333-010		COIL,OSC 9.43MHZ
L601	87-005-847-080		COIL,2.2UH CECS
L801	87-A50-093-010		COIL,CLOCK 5.76MHZ
LED101	87-A40-589-040		LED,SLR-56VCT31 RED
LED421	87-070-278-010		LED,SLZ-738A-24-S
LED422	87-070-290-010		LED,SLZ 936-30-S
LED423	87-070-278-010		LED,SLZ-738A-24-S
LED424	87-070-278-010		LED,SLZ-738A-24-S
LED425	87-070-290-010		LED,SLZ 936-30-S
LED426	87-070-278-010		LED,SLZ-738A-24-S
LED440	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED441	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED442	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED443	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED444	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED445	87-A40-619-040		LED,SLR-56PT-T31-W GRN

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
LED446	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED447	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED448	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED449	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED451	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED452	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED453	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED454	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED455	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED456	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED461	87-A40-317-080		LED,SLR-342VCT31 RED
LED462	87-A40-317-080		LED,SLR-342VCT31 RED
LED463	87-A40-317-080		LED,SLR-342VCT31 RED
LED464	87-A40-317-080		LED,SLR-342VCT31 RED
LED465	87-A40-317-080		LED,SLR-342VCT31 RED
S201	87-A90-095-080		SW,TACT EVQ11G04M
S211	87-A90-095-080		SW,TACT EVQ11G04M
S212	87-A90-095-080		SW,TACT EVQ11G04M
S213	87-A90-095-080		SW,TACT EVQ11G04M
S214	87-A90-095-080		SW,TACT EVQ11G04M
S215	87-A90-095-080		SW,TACT EVQ11G04M
S216	87-A90-095-080		SW,TACT EVQ11G04M
S217	87-A90-095-080		SW,TACT EVQ11G04M
S218	87-A90-095-080		SW,TACT EVQ11G04M
S219	87-A90-095-080		SW,TACT EVQ11G04M
S220	87-A90-095-080		SW,TACT EVQ11G04M
S221	87-A90-095-080		SW,TACT EVQ11G04M
S222	87-A90-095-080		SW,TACT EVQ11G04M
S223	87-A90-095-080		SW,TACT EVQ11G04M
S224	87-A90-095-080		SW,TACT EVQ11G04M
S225	87-A90-095-080		SW,TACT EVQ11G04M
S231	87-A90-095-080		SW,TACT EVQ11G04M
S232	87-A90-095-080		SW,TACT EVQ11G04M
S233	87-A90-095-080		SW,TACT EVQ11G04M
S234	87-A90-095-080		SW,TACT EVQ11G04M
S251	87-A90-095-080		SW,TACT EVQ11G04M
S252	87-A90-095-080		SW,TACT EVQ11G04M
S253	87-A90-095-080		SW,TACT EVQ11G04M
S254	87-A90-095-080		SW,TACT EVQ11G04M
S255	87-A90-095-080		SW,TACT EVQ11G04M
S256	87-A90-095-080		SW,TACT EVQ11G04M
S257	87-A90-095-080		SW,TACT EVQ11G04M
S259	87-A90-095-080		SW,TACT EVQ11G04M
S260	87-A90-095-080		SW,TACT EVQ11G04M<HR>
S261	87-A90-095-080		SW,TACT EVQ11G04M<HR>
S263	87-A90-095-080		SW,TACT EVQ11G04M
SW101	87-A90-535-010		SW,RTRY EC16B24304

TUNER C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C701	87-010-381-080		CAP, ELECT 330-16V
C702	87-010-404-080		CAP, ELECT 4.7-50V
C703	87-012-286-080		CAP, U 0.01-25
C704	87-012-286-080		CAP, U 0.01-25
C705	87-A10-592-080		C-CAP,S 0.015-50 J B
C706	87-A10-592-080		C-CAP,S 0.015-50 J B
C709	87-012-195-080		C-CAP,U 100P-50CH
C711	87-010-260-080		CAP,ELECT 47-25V<LH,U,HA>
C711	87-010-553-080		CAP,E 47-16 M 5L<HR>
C712	87-010-831-080		C-CAP,U,0.1-16F
C714	87-012-286-080		CAP, U 0.01-25
C717	87-012-286-080		CAP, U 0.01-25
C718	87-012-179-080		C-CAP,U 20P-50 CH<LH,U,HA>
C719	87-012-286-080		CAP, U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH
C721	87-012-176-080		CAP 15P
C722	87-012-176-080		CAP 15P
C723	87-012-274-080		CHIP CAP,U 1000P-50B
C725	87-012-274-080		CHIP CAP,U 1000P-50B
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP, ELECT 220-10V
C729	87-012-274-080		CHIP CAP,U 1000P-50B
C731	87-012-286-080		CAP, U 0.01-25
C733	87-010-987-080		C-CAP,S 1500P-50 CH
C734	87-010-987-080		C-CAP,S 1500P-50 CH
C735	87-010-987-080		C-CAP,S 1500P-50 CH
C736	87-010-987-080		C-CAP,S 1500P-50 CH
C737	87-A10-592-080		C-CAP,S 0.015-50 J B
C738	87-A10-592-080		C-CAP,S 0.015-50 J B
C751	87-010-220-080		C-CAP,S 0.018-25KB<HR>
C751	87-012-365-080		C-CAP,S 0.027-25VBK<LH,U,HA>
C752	87-010-220-080		C-CAP,S 0.018-25KB<HR>
C752	87-012-365-080		C-CAP,S 0.027-25VBK<LH,U,HA>
C756	87-012-286-080		CAP, U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH
C758	87-012-167-080		C-CAP,U 5P-50 CH
C763	87-010-829-080		CAP, U 0.047-16
C764	87-012-337-080		C-CAP,U 56P-50 CH
C765	87-012-286-080		CAP, U 0.01-25
C768	87-012-286-080		CAP, U 0.01-25
C769	87-010-260-080		CAP, ELECT 47-25V
C770	87-010-829-080		CAP, U 0.047-16
C771	87-010-383-080		CAP, ELECT 33-25V
C772	87-010-829-080		CAP, U 0.047-16
C773	87-010-196-080		CHIP CAPACITOR,0.1-25
C774	87-010-263-080		CAP, ELECT 100-10V
C775	87-010-404-080		CAP, ELECT 4.7-50V
C776	87-012-286-080		CAP, U 0.01-25<LH,U,HA>
C777	87-010-400-080		CAP, ELECT 0.47-50V
C778	87-010-401-080		CAP, ELECT 1-50V
C779	87-010-401-080		CAP, ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C781	87-010-405-080		CAP, ELECT 10-50V
C782	87-010-405-080		CAP, ELECT 10-50V
C783	87-012-286-080		CAP, U 0.01-25
C784	87-012-286-080		CAP, U 0.01-25
C785	87-010-494-080		CAP, E 1-50M 5L<HR>
C785	87-010-401-080		CAP, ELECT 1-50V<LH,U,HA>
C786	87-010-494-080		CAP, E 1-50M 5L<HR>
C786	87-010-401-080		CAP, ELECT 1-50V<LH,U,HA>
C789	87-012-275-080		C-CAP,U 1200P-50 B
C790	87-012-275-080		C-CAP,U 1200P-50 B
C791	87-010-405-080		CAP, ELECT 10-50V
C793	87-012-273-080		C-CAP,U 820P-50 B
C794	87-010-406-080		CAP, ELECT 22-50
C795	87-010-596-080		CAP, S 0.047-16
C796	87-010-403-080		CAP, ELECT 3.3-50V
C799	87-010-829-080		CAP, U 0.047-16
C812	87-012-286-080		CAP, U 0.01-25
C820	87-010-260-080		CAP, ELECT 47-25V
C821	87-012-286-080		CAP, U 0.01-25
C822	87-012-286-080		CAP, U 0.01-25
C823	87-012-286-080		CAP, U 0.01-25
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C940	87-012-286-080		C-CAP,U 0.01-25 KB<HR>
C941	87-012-180-080		C-CAP,U 22P-50 J CH<HR>
C943	87-012-286-080		C-CAP,U 0.01-25 KB<HR>
C944	87-014-051-080		CAP,PP 560P-100 J PL<HR>
C945	87-012-286-080		C-CAP,U 0.01-25 KB<HR>
C947	87-012-286-080		C-CAP,U 0.01-25 KB<HR>
C950	87-014-073-080		CAP,PP 4700P-100J<HR>
C952	87-012-286-080		C-CAP,U 0.01-25 KB<HR>
C953	87-012-286-080		C-CAP,U 0.01-25 KB<HR>
C954	87-012-358-080		C-CAP,S 0.47-10 ZF<HR>
C956	87-010-263-080		CAP,E 100-10M 11L<HR>
C959	87-010-831-080		C-CAP,U 0.1-16 ZF<HR>
C959	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,U,HA>
C960	87-012-350-080		C-CAP,1-25 ZF<HR>
C960	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,U,HA>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C961	87-012-170-080		C-CAP,U 8P-50 CH<LH,U,HA>
C963	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,U,HA>
CF801	87-008-261-010		FILTER, SFE10.7MA5-A
CF802	87-008-261-010		FILTER, SFE10.7MA5-A
CN701	87-A60-700-010		CONN,13P H GRY TUC-P13X-C1
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM
J801	87-A60-703-010		TERMINAL,ANT3P CJ-9037<HR>
J801	87-A60-702-010		TERMINAL,ANT4P CJ-9036<LH,U,HA>
J940	81-754-629-010		CONNECTOR XH 2P (UL)<HR>
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-052-010		FLTR,CFMT-450A(TOK)<HR>
L772	87-A90-733-010		FLTR,PCFAZH-450 (TOK)<LH,U,HA>
L941	87-A50-022-010		COIL,ANT SW(COI)7.96MHZ<HR>
L942	87-A50-173-010		COIL,OSC SW-N(COI)<HR>
L943	87-A50-432-010		COIL,1MH K CW<HR>
L944	87-A50-159-010		COIL,10MH K C2B<HR>
L981	88-NF8-625-110		COIL,AM PACK 3N(TOK)<HR>
L981	87-NF4-650-010		COIL,AM PACK 4N(TOK)<LH,U,HA>
TC941	87-011-220-080		TRIMMER,CER 20P 6.15X5.9<HR>
TC943	87-011-221-080		TRIMMER,CER 30P 6.15X5.9<HR>
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X771	87-030-354-010		VIB,CER 450.0KHZ BFU C<HR>

PRO C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-010-544-080		CAP, ELECT 0.1-50V
C102	87-010-544-080		CAP, ELECT 0.1-50V
C203	87-010-544-080		CAP, ELECT 0.1-50V
C204	87-010-544-080		CAP, ELECT 0.1-50V
C205	87-010-186-080		CAP,CHIP 4700P
C206	87-010-186-080		CAP,CHIP 4700P
C207	87-010-404-080		CAP, ELECT 4.7-50V
C208	87-010-404-080		CAP, ELECT 4.7-50V
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-010-322-080		C-CAP,S 100P-50 CH
C211	87-010-260-080		CAP, ELECT 47-25V
C212	87-010-260-080		CAP, ELECT 47-25V
C213	87-A10-516-080		C-CAP,S 100P-200 J CH
C214	87-A10-516-080		C-CAP,S 100P-200 J CH
C219	87-A10-712-080		C-CAP,S 0.22-50 ZF
C220	87-A10-712-080		C-CAP,S 0.22-50 ZF
C221	87-010-186-080		CAP,CHIP 4700P
C222	87-010-186-080		CAP,CHIP 4700P
C299	87-010-197-080		CAP, CHIP 0.01 DM
C303	87-010-404-080		CAP, ELECT 4.7-50V
C304	87-010-404-080		CAP, ELECT 4.7-50V
C305	87-010-184-080		CHIP CAPACITOR 3300P(K)
C306	87-010-184-080		CHIP CAPACITOR 3300P(K)
C307	87-010-403-080		CAP, ELECT 3.3-50V
C308	87-010-403-080		CAP, ELECT 3.3-50V
C309	87-010-322-080		C-CAP,S 100P-50 CH
C310	87-010-322-080		C-CAP,S 100P-50 CH
C311	87-A10-946-080		C-CAP,S 220P-100 J CH
C312	87-A10-946-080		C-CAP,S 220P-100 J CH
C313	87-010-260-080		CAP, ELECT 47-25V
C314	87-010-260-080		CAP, ELECT 47-25V
C319	87-A10-712-080		C-CAP,S 0.22-50 ZF
C320	87-A10-712-080		C-CAP,S 0.22-50 ZF
C321	87-010-186-080		CAP,CHIP 4700P
C322	87-010-186-080		CAP,CHIP 4700P
C501	87-016-299-080		CAP,E 10-100 SME
C502	87-012-368-080		C-CAP,S 0.1-50 F
C503	87-016-299-080		CAP,E 10-100 SME
CN101	87-A60-727-010		CONN,13P JL-R
CN102	87-A60-727-010		CONN,13P JL-R
R225	87-A00-418-080		RES,M/F 0.15-3W J
R226	87-A00-418-080		RES,M/F 0.15-3W J
R227	87-A00-418-080		RES,M/F 0.15-3W J
R228	87-A00-418-080		RES,M/F 0.15-3W J
R239	87-A00-418-080		RES,M/F 0.15-3W J
R242	87-A00-418-080		RES,M/F 0.15-3W J
R325	87-A00-258-080		RES,M/F 0.22-1W J
R326	87-A00-258-080		RES,M/F 0.22-1W J
R327	87-A00-258-080		RES,M/F 0.22-1W J
R328	87-A00-258-080		RES,M/F 0.22-1W J
R339	87-A00-258-080		RES,M/F 0.22-1W J
R340	87-A00-258-080		RES,M/F 0.22-1W J
TH201	87-A91-042-080		C-THMS,100K 55001
TH202	87-A91-042-080		C-THMS,100K 55001
TH301	87-A91-042-080		C-THMS,100K 55001
TH302	87-A91-042-080		C-THMS,100K 55001

PT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-010-387-080		CAP,E 470-25 SME
C103	87-A11-148-080		CAP,TC U 0.1-50 Z F
C104	87-A11-148-080		CAP,TC U 0.1-50 Z F
C105	87-A11-148-080		CAP,TC U 0.1-50 Z F
C106	87-A11-148-080		CAP,TC U 0.1-50 Z F
C107	87-A11-148-080		CAP,TC U 0.1-50 Z F
C108	87-A11-148-080		CAP,TC U 0.1-50 Z F
C109	87-A11-148-080		CAP,TC U 0.1-50 Z F
C110	87-A11-148-080		CAP,TC U 0.1-50 Z F
C111	87-010-917-090		CAP,E 3300-50 M SMG
C112	87-010-917-090		CAP,E 3300-50 M SMG
C113	87-A10-231-090		CAP,E 3300-80
C114	87-A10-231-090		CAP,E 3300-80
C116	87-010-403-080		CAP, ELECT 3.3-50V
CN1	87-A60-851-010		CONN,9P V VH
CN103	87-099-043-010		CONN 2P EH
⚠ F101	87-035-458-010		FUSE,4A 250V T W/C<HR,LH,HA>
⚠ F101	87-035-493-010		FUSE,8A 125V<U>
⚠ F102	87-035-458-010		FUSE,4A 250V T W/C<HR,LH,HA>
⚠ FC100	87-033-213-080		FUSE CLAMP,PFC5000
⚠ FC101	87-033-213-080		FUSE CLAMP,PFC5000
⚠ FC102	87-033-213-080		FUSE CLAMP,PFC5000<HR,LH,HA>
⚠ FC103	87-033-213-080		FUSE CLAMP,PFC5000<HR,LH,HA>
⚠ PR101	87-026-691-080		FUSE,10A 125V 251<U>
⚠ PR101	87-026-682-080		PROTECTOR,10A 60V491<HR,LH,HA>
⚠ PR102	87-026-691-080		FUSE,10A 125V 251<U>
⚠ PR102	87-026-682-080		PROTECTOR,10A 60V491<HR,LH,HA>
⚠ PR103	87-026-691-080		FUSE,10A 125V 251<U>
⚠ PR103	87-026-682-080		PROTECTOR,10A 60V491<HR,LH,HA>
⚠ PR104	87-026-691-080		FUSE,10A 125V 251<U>
⚠ PR104	87-026-682-080		PROTECTOR,10A 60V491<HR,LH,HA>
⚠ PR105	87-A90-210-080		FUSE,7A 125V 251<U>
⚠ PR105	87-A90-195-080		PROTECTOR 7A 125V 49<HR,LH,HA>
⚠ PR106	87-A90-210-080		FUSE,7A 125V 251<U>
⚠ PR106	87-A90-195-080		PROTECTOR 7A 125V 49<HR,LH,HA>
⚠ PR107	87-035-495-080		FUSE,3/4A 125V D/U/C<U>
⚠ PR107	87-A90-757-080		PROTECTOR,0.75A 60V <HR,LH,HA>
⚠ PR108	87-A91-276-080		FUSE,125MA 125V F 251<U>
⚠ PT1	8Z-NF3-603-010		PT,HE ZNF-3<HR>
⚠ PT1	8Z-NF3-602-010		PT,LH ZNF-3<LH,HA>
⚠ PT1	8Z-NF3-601-010		PT,U ZNF-3<U>
⚠ PT2	8Z-NF8-663-010		PT,SUB ZNF-8(H)<HR,LH,HA>
⚠ PT2	8Z-NF8-661-010		PT,SUB ZNF-8(U)<U>
⚠ RY101	87-A91-281-010		RELAY,AC DC 12VOSA<HR,LH,HA>
⚠ RY102	87-A90-976-010		RELAY,AC12V SDT-S-112LMR<U>
⚠ SW101	87-A90-165-010		SW,SL 1-2-3 SWS2301<HR,LH,HA>
⚠ T101	87-A60-317-010		TERMINAL, 1P MSC
⚠ T102	87-A60-317-010		TERMINAL, 1P MSC

KEY C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CN301	87-099-202-010		CONN,9P 6216 H
LED311	87-A40-317-080		LED,SLR-342VCT31 RED
LED312	87-A40-317-080		LED,SLR-342VCT31 RED
LED313	87-A40-317-080		LED,SLR-342VCT31 RED
LED314	87-A40-317-080		LED,SLR-342VCT31 RED

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
LED315	87-A40-317-080		LED,SLR-342VCT31 RED
LED331	87-A40-563-010		LED,SEL6515C-LF62 PGRN
LED332	87-A40-563-010		LED,SEL6515C-LF62 PGRN
LED333	87-A40-563-010		LED,SEL6515C-LF62 PGRN
LED351	87-A40-563-010		LED,SEL6515C-LF62 PGRN
LED352	87-A40-563-010		LED,SEL6515C-LF62 PGRN
LED353	87-A40-563-010		LED,SEL6515C-LF62 PGRN
S310	87-A90-095-080		SW,TACT EVQ11G04M
S311	87-A90-095-080		SW,TACT EVQ11G04M
S312	87-A90-095-080		SW,TACT EVQ11G04M
S313	87-A90-095-080		SW,TACT EVQ11G04M
S314	87-A90-095-080		SW,TACT EVQ11G04M
S315	87-A90-095-080		SW,TACT EVQ11G04M
S316	87-A90-095-080		SW,TACT EVQ11G04M
S317	87-A90-095-080		SW,TACT EVQ11G04M
S318	87-A90-095-080		SW,TACT EVQ11G04M
S319	87-A90-095-080		SW,TACT EVQ11G04M
S320	87-A90-095-080		SW,TACT EVQ11G04M

JOG C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-182-080		C-CAP,S 2200P-50 B
C531	87-010-196-080		CHIP CAPACITOR,0.1-25
C532	87-010-196-080		CHIP CAPACITOR,0.1-25
CN501	87-099-201-010		CONN,8P 6216 H
LED521	87-A40-640-010		LED,SELU1E10CXM BLUE-EF
LED522	87-A40-640-010		LED,SELU1E10CXM BLUE-EF
S511	87-A90-095-080		SW,TACT EVQ11G04M
S512	87-A90-095-080		SW,TACT EVQ11G04M
S513	87-A90-095-080		SW,TACT EVQ11G04M
S514	87-A90-095-080		SW,TACT EVQ11G04M
S515	87-A90-095-080		SW,TACT EVQ11G04M
S516	87-A90-095-080		SW,TACT EVQ11G04M
S517	87-A90-095-080		SW,TACT EVQ11G04M
S518	87-A90-095-080		SW,TACT EVQ11G04M
S519	87-A90-095-080		SW,TACT EVQ11G04M
S520	87-A90-095-080		SW,TACT EVQ11G04M
SW501	87-A91-111-010		SW,RTRY EC12E12404-20MM

GEQ C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C901	87-010-402-080		CAP, ELECT 2.2-50V
C902	87-010-402-080		CAP, ELECT 2.2-50V
C903	87-010-404-080		CAP, ELECT 4.7-50V
C904	87-010-404-080		CAP, ELECT 4.7-50V
C905	87-010-404-080		CAP, ELECT 4.7-50V
C907	87-016-669-080		C-CAP,S 0.1-25 K B
C908	87-016-669-080		C-CAP,S 0.1-25 K B
C909	87-016-460-080		C-CAP,S 0.22-16 B
C910	87-016-460-080		C-CAP,S 0.22-16 B
C911	87-012-365-080		C-CAP,S 0.027-25VBK
C912	87-012-365-080		C-CAP,S 0.027-25VBK
C913	87-010-956-080		CHIP-CAP,S 0.068-25B
C914	87-010-956-080		CHIP-CAP,S 0.068-25B
C915	87-010-197-080		CAP, CHIP 0.01 DM
C916	87-010-197-080		CAP, CHIP 0.01 DM
C917	87-010-198-080		CAP, CHIP 0.022
C918	87-010-198-080		CAP, CHIP 0.022
C919	87-010-183-080		C-CAP,S 2700P-50 B
C920	87-010-183-080		C-CAP,S 2700P-50 B
C921	87-010-188-080		CAP,CHIP 6800P
C922	87-010-188-080		CAP,CHIP 6800P
C923	87-010-178-080		CHIP CAP 1000P
C924	87-010-178-080		CHIP CAP 1000P
C925	87-010-182-080		C-CAP,S 2200P-50 B
C926	87-010-182-080		C-CAP,S 2200P-50 B
C927	87-010-112-080		CAP, ELECT 100-16V
C928	87-010-196-080		CHIP CAPACITOR,0.1-25
C929	87-010-322-080		C-CAP,S 100P-50 CH
C930	87-010-322-080		C-CAP,S 100P-50 CH
C931	87-010-322-080		C-CAP,S 100P-50 CH
PN901	87-A60-546-010		CONN,11P H GRY TUC-P11X-C1

KEY CON C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C501	87-A10-060-080		C-CAP,S 0.18-16 K B<HR>
C502	87-A10-060-080		C-CAP,S 0.18-16 K B<HR>
C503	87-012-154-080		C-CAP,S 150P-50 CH<HR>
C504	87-012-154-080		C-CAP,S 150P-50 CH<HR>
C505	87-012-145-080		CAP, CHIP S 270P CH<HR>
C506	87-012-145-080		CAP, CHIP S 270P CH<HR>
C507	87-010-183-080		C-CAP,S 2700P-50 B<HR>
C509	87-010-196-080		CHIP CAPACITOR,0.1-25<HR>
C510	87-010-177-080		C-CAP,S 820P-50 SL<HR>
C511	87-010-177-080		C-CAP,S 820P-50 SL<HR>
C512	87-010-196-080		CHIP CAPACITOR,0.1-25<HR>
C513	87-010-380-080		CAP, ELECT 47-16V<HR>
C514	87-010-196-080		CHIP CAPACITOR,0.1-25<HR>
C515	87-010-263-080		CAP, ELECT 100-10V<HR>
C517	87-010-183-080		C-CAP,S 2700P-50 B<HR>
C521	87-016-460-080		C-CAP,S 0.22-16 B<HR>
C522	87-016-460-080		C-CAP,S 0.22-16 B<HR>
C523	87-016-460-080		C-CAP,S 0.22-16 B<HR>
C527	87-010-196-080		CHIP CAPACITOR,0.1-25<HR>
CN501	87-A60-689-010		CONN,7P H GRY TUC-P07X-C1<HR>

DECK C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CON105	87-099-756-019		CONN, 15P 9604 S F
SFR1	87-024-581-019		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-410		SOL ASSY, 27
SOL2	82-ZM1-618-410		SOL ASSY, 27
SW1	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW2	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW3	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW4	87-036-110-010		SW,MICRO SPPB62
SW5	87-036-110-010		SW,MICRO SPPB62
SW6	87-036-110-010		SW,MICRO SPPB62
SW8	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW9	87-A90-248-019		SW,MICRO ESE11SH2CXQ
W001	82-ZM3-601-019		RBN,CORD,4P-75

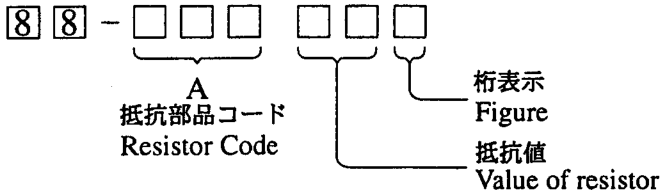
HEAD-1 C.B

HEAD-2 C.B

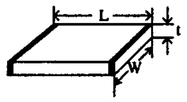
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CON351	87-NF6-616-010		CONN ASSY,8P-RPB

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

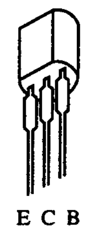
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding


8 8 -
A
抵抗部品コード
Resistor Code
桁表示
Figure
抵抗値
Value of resistor

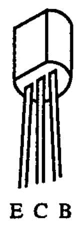
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

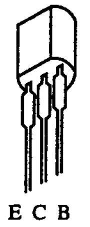
TRANSISTOR ILLUSTRATION



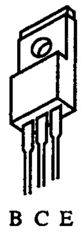
KTA1266GR
KTC3198GR
KTC3199GR



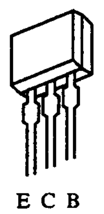
CC5551



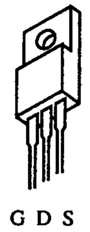
CSA1585BC



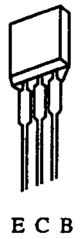
2SB1344
2SB1370
2SB1588
2SD2025
2SD2439



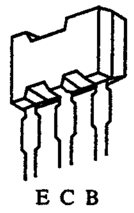
2SC4115



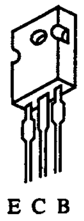
2SK3053



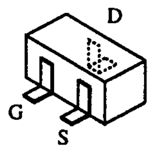
DTC114ES



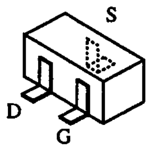
2SB1237Q



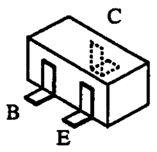
2SB1436



2SK2158



2SK360E

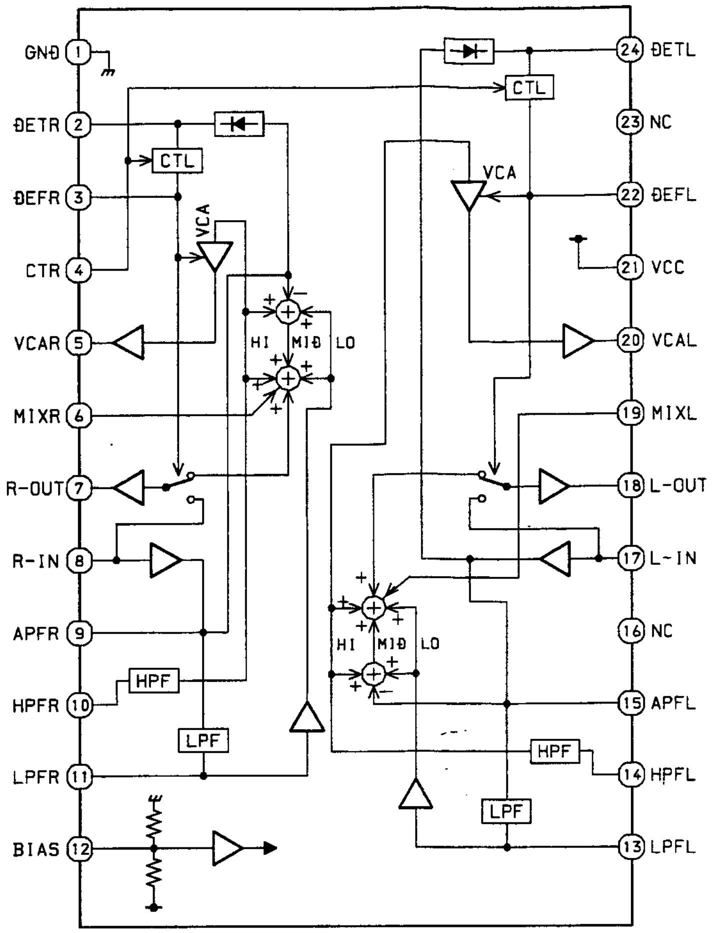


2SA1235F
2SA1298Y
2SA1514K
2SC2714O
2SC3052F
2SD1306E
CMBT5551

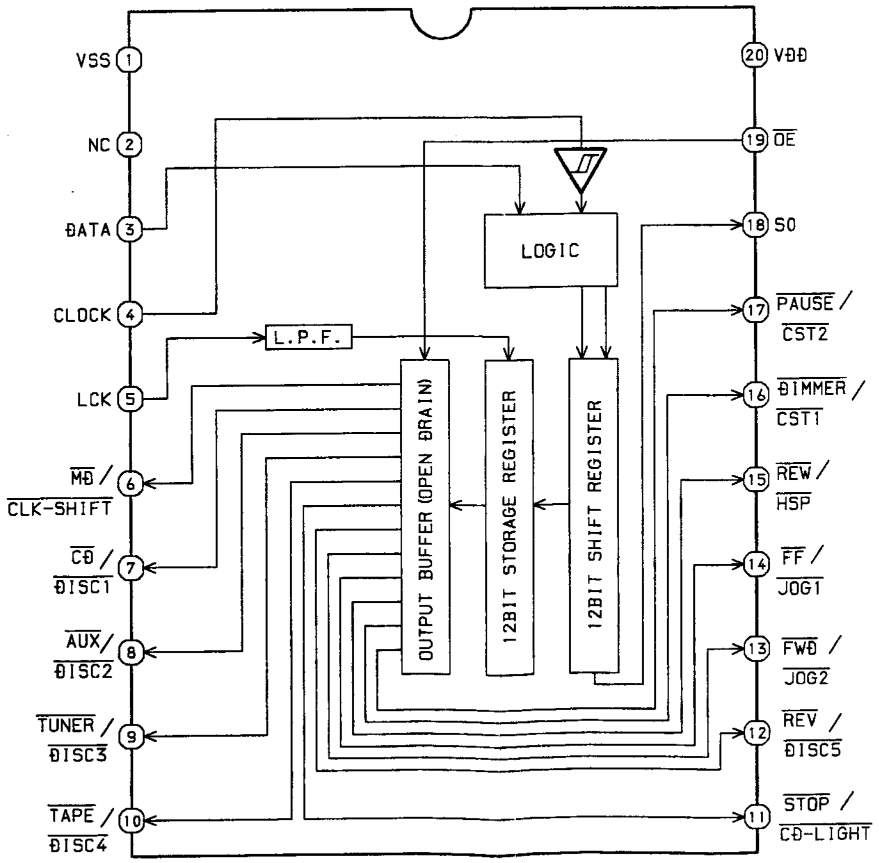
CSD1306E
RT1N141C
RT1P141C
RT1P144C
RT1P441C
DTA123EKA
DTA143EKA

IC BLOCK DIAGRAM – 1

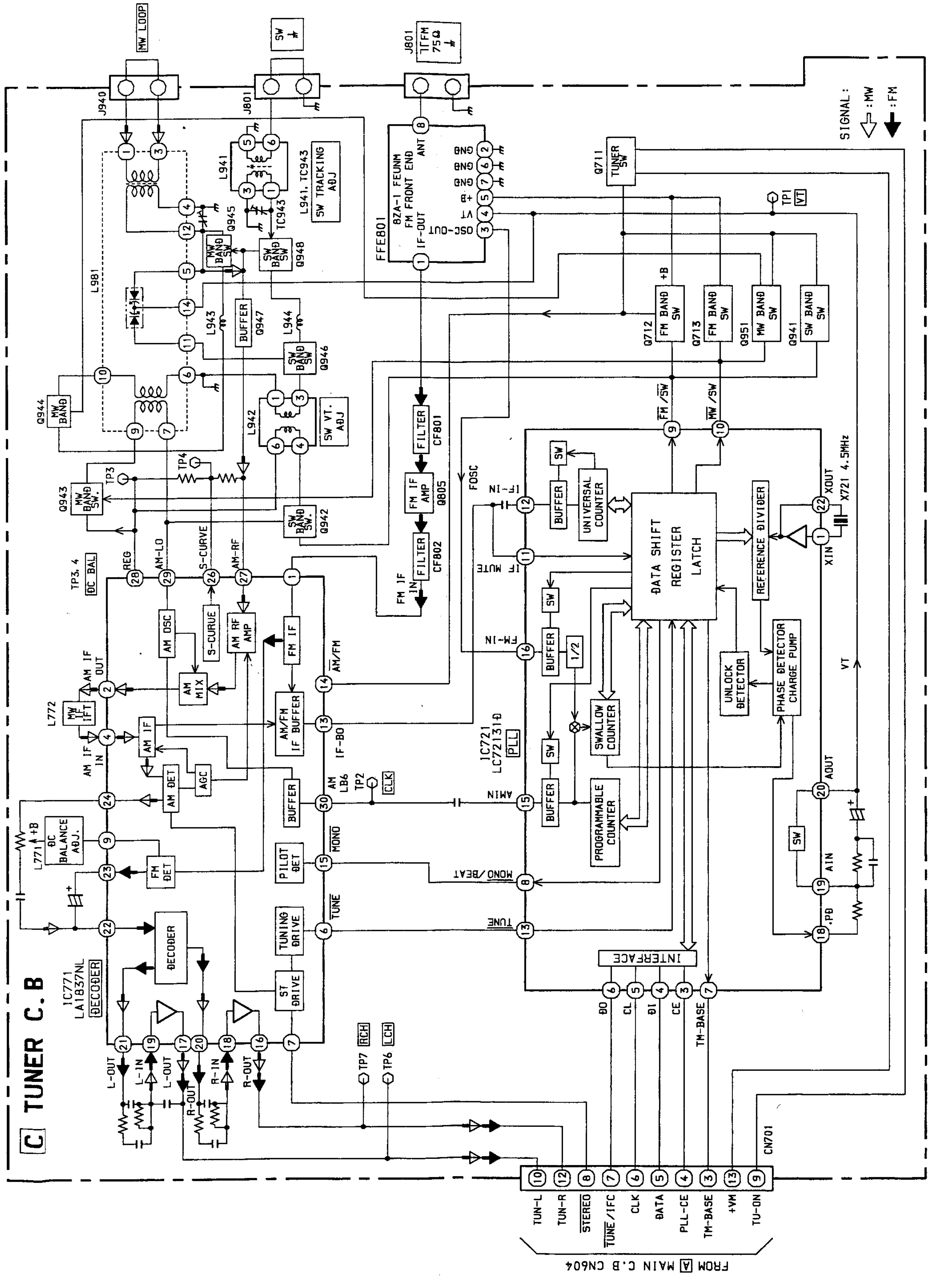
IC, BA3880FS


GND 1
DETR 2
DEFR 3
CTR 4
VCAR 5
MIXR 6
R-OUT 7
R-IN 8
APFR 9
HPFR 10
LPFR 11
BIAS 12
24 DETL
23 NC
22 DEFL
21 VCC
20 VCAL
19 MIXL
18 L-OUT
17 L-IN
16 NC
15 APFL
14 HPFL
13 LPFL
CTL
CTL
VCA
VCA
HI
MID
LO
HI
MID
LO
HPF
LPF
HPF
LPF

IC, BU2099FV

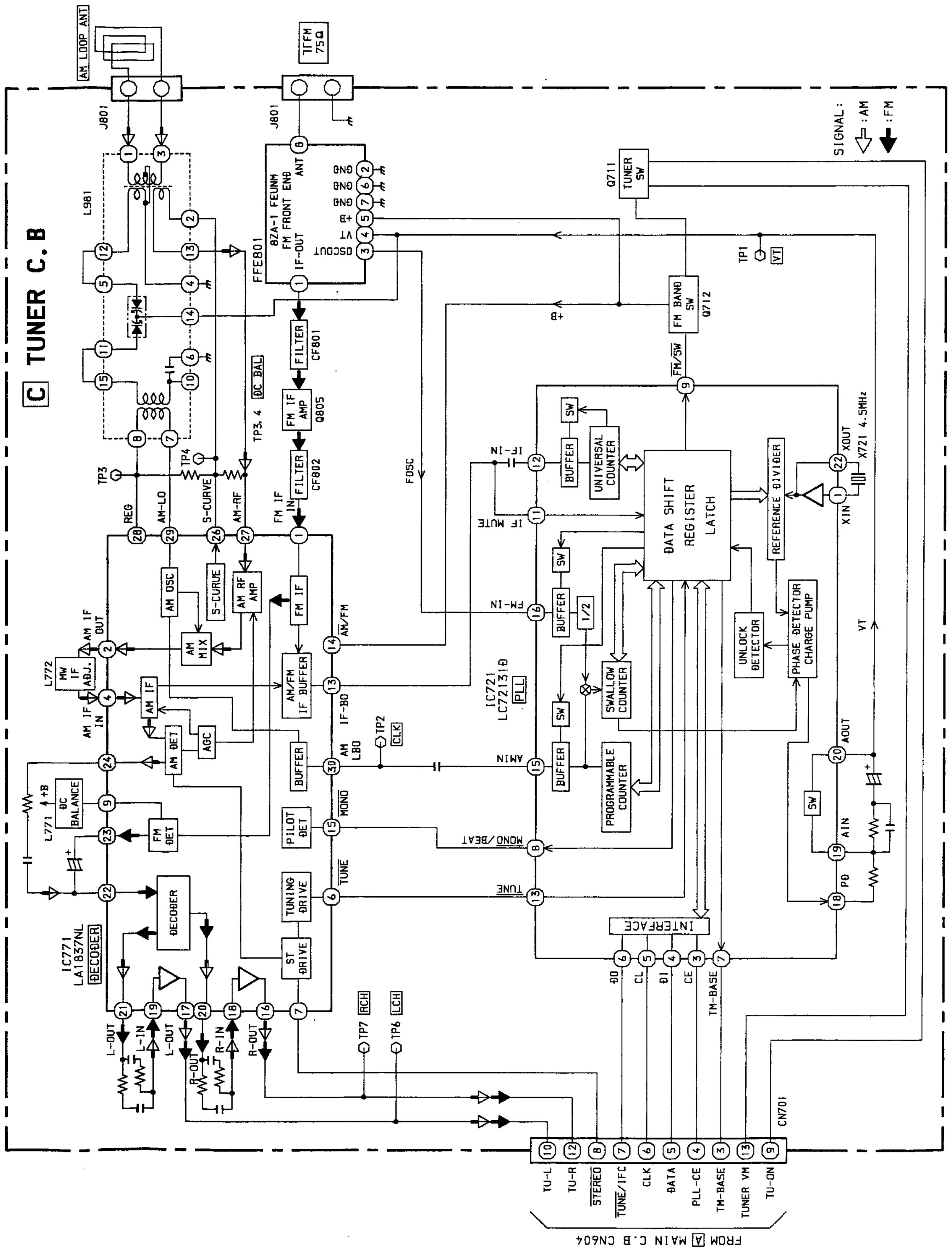

VSS 1
NC 2
DATA 3
CLOCK 4
LCK 5
MD / CLK-SHIFT 6
CD / DISC1 7
AUX / DISC2 8
TUNER / DISC3 9
TAPE / DISC4 10
20 VDD
19 OE
18 SO
17 PAUSE / CST2
16 DIMMER / CST1
15 REW / HSP
14 FF / JOG1
13 FWD / JOG2
12 REV / DISC5
11 STOP / CD-LIGHT
LOGIC
L.P.F.
OUTPUT BUFFER (OPEN DRAIN)
12BIT STORAGE REGISTER
12BIT SHIFT REGISTER

BLOCK DIAGRAM－1 (TUNER : HR)



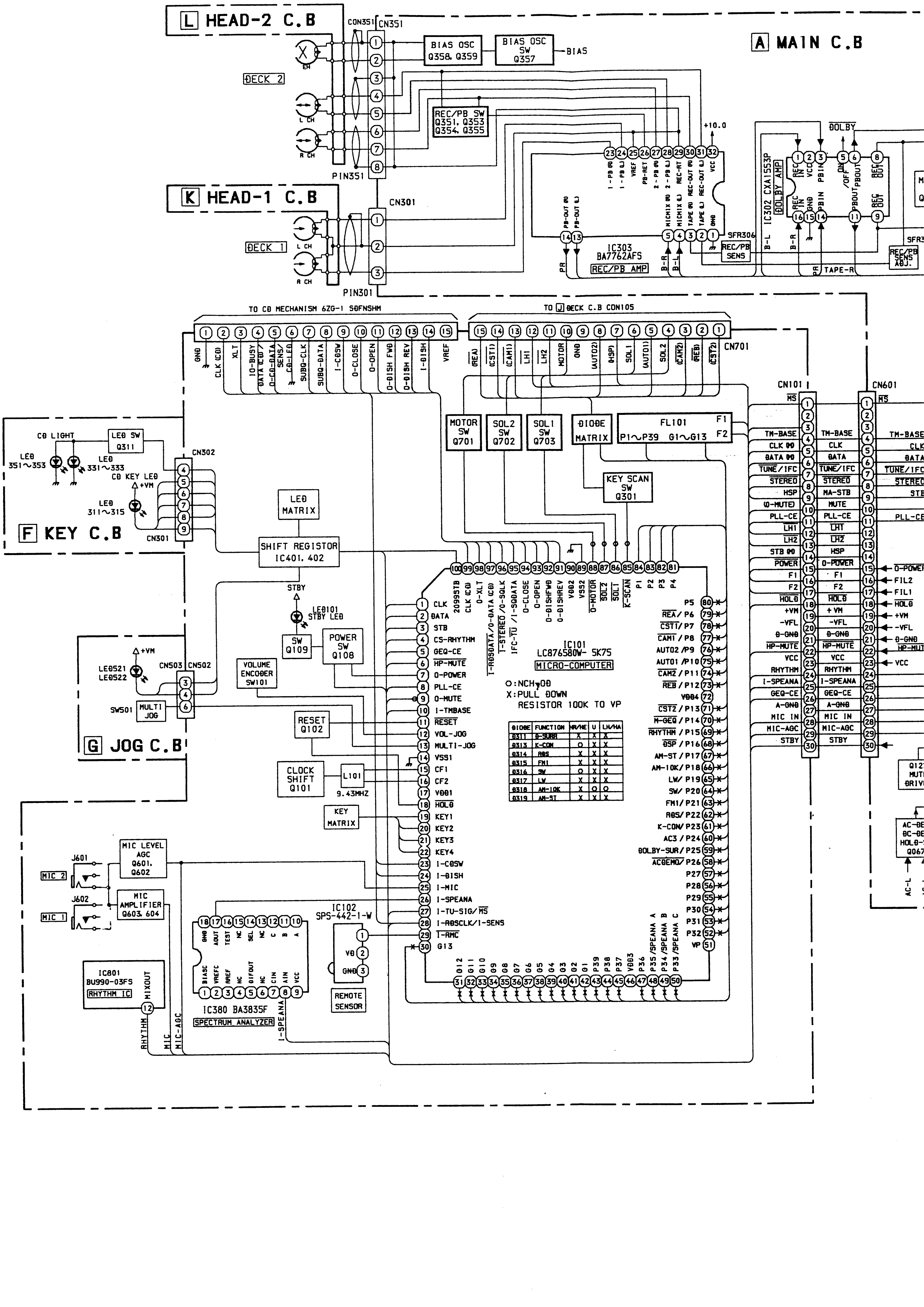
C TUNER C. B
MW LOOP
SW
J801
TFM 75Ω
J940
SIGNAL: ⇩ : MW ⬇ : FM
FFE801
8ZA-1 FEUNM FM FRONT END
ANT
GND
+B
VT
OSC-OUT
IF-OUT
Q711 TUNER SW
TP1 VT
L941
TC943
L941, TC943 SW TRACKING ADJ
Q945 MW BAND SW
Q948 SW BAND SW
L981
L943
Q947 BUFFER
L944
Q946 SW BAND SW
Q944 MW BAND
L942
SW VT. ADJ
Q712 FM BAND SW
Q713 FM BAND SW
Q951 MW BAND SW
Q941 SW BAND SW
FILTER CF801
FM IF AMP Q805
FILTER CF802
FM IF IN
Q943 MW BAND SW.
Q942 SW BAND SW.
TP3
TP4
TP3, 4 DC BAL
REG
AM-LO
S-CURVE
AM-RF
FOSC
FM/SW
MW/SW
IF-IN
IF MUTE
FM-IN
AMIN
MONO/BEAT
TUNE
BUFFER
SW
UNIVERSAL COUNTER
DATA SHIFT REGISTER LATCH
REFERENCE DIVIDER
XOUT
X721 4.5MHz
XIN
1/2
SWALLOW COUNTER
UNLOCK DETECTOR
PHASE DETECTOR CHARGE PUMP
VT
PROGRAMMABLE COUNTER
AOUT
AIN
PD
IC721 LC72131D PLL
INTERFACE
DO
CL
DI
CE
TM-BASE
AM OSC
S-CURVE
AM RF AMP
FM IF
AM MIX
AM/FM IF BUFFER
AM/FM
IF-BO
AM IF OUT
L772 MW IFT
AM IF IN
AM IF
AM DET
AGC
AM LB6
TP2 CLK
L771 DC BALANCE ADJ.
+B
FM DET
PILOT DET
MONO
TUNING DRIVE
DECODER
ST DRIVE
IC771 LA1837NL DECODER
L-OUT
L-IN
R-OUT
R-IN
TP7 RCH
TP6 LCH
CN701
TUN-L
TUN-R
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
+VM
TU-ON
FROM A MAIN C.B CN604

BLOCK DIAGRAM－2 (TUNER : U,LH,HA)



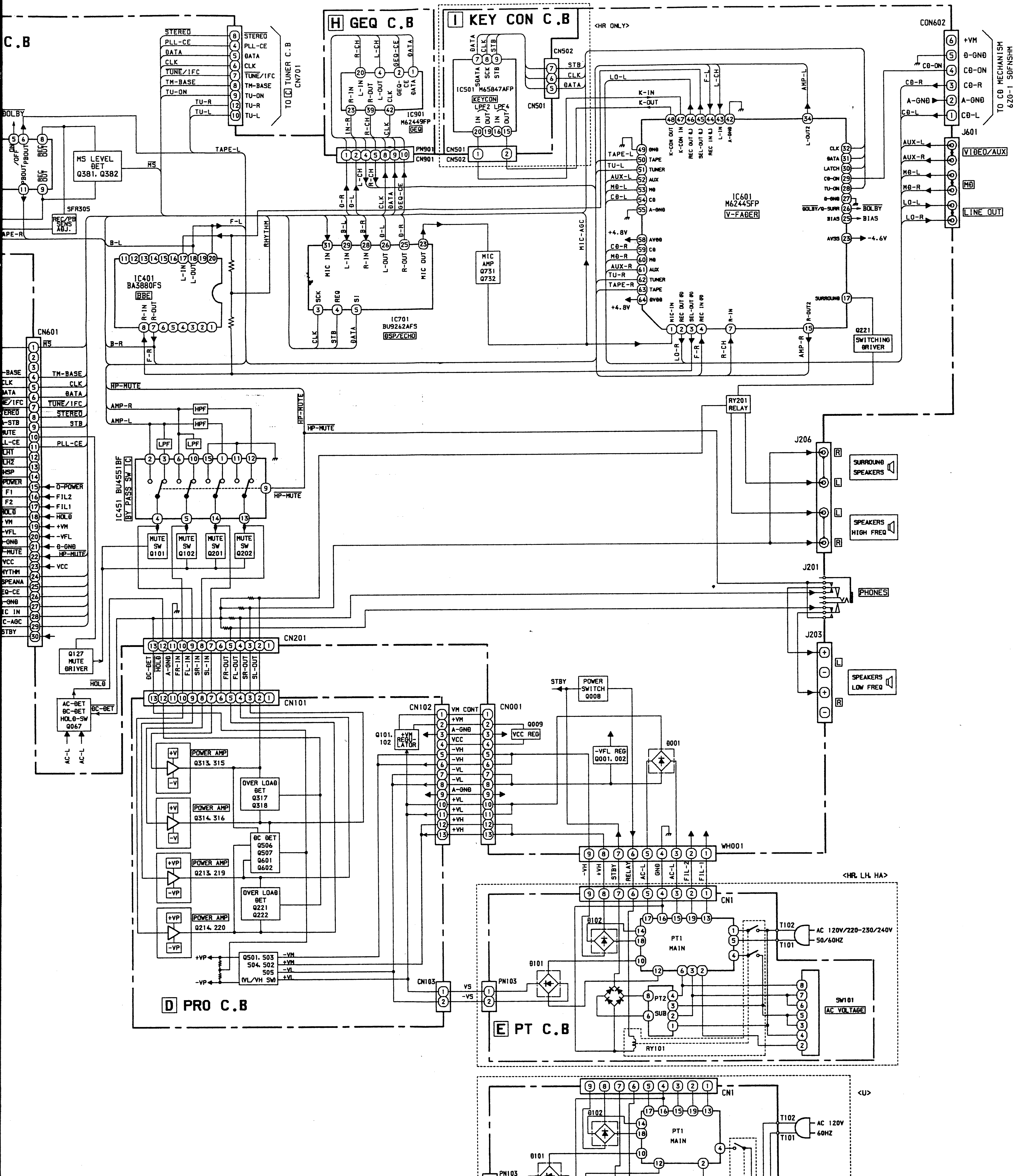
C TUNER C. B
AM LOOP ANT
TFM 75Ω
J801
SIGNAL: ⇩ : AM ⬇ : FM
FFE801
8ZA-1 FEUNM FM FRONT END
ANT
GND
+B
VT
OSCOUT
IF-OUT
Q711 TUNER SW
TP1 VT
L981
Q712 FM BAND SW
+B
FILTER CF801
FM IF AMP Q805
FILTER CF802
FM IF IN
TP3
TP4
TP3, 4 DC BAL
REG
AM-LO
S-CURVE
AM-RF
FOSC
FM/SW
IF-IN
IF MUTE
FM-IN
AMIN
MONO/BEAT
TUNE
BUFFER
SW
UNIVERSAL COUNTER
DATA SHIFT REGISTER LATCH
REFERENCE DIVIDER
XOUT
X721 4.5MHz
XIN
1/2
SWALLOW COUNTER
UNLOCK DETECTOR
PHASE DETECTOR CHARGE PUMP
VT
PROGRAMMABLE COUNTER
AOUT
AIN
PD
IC721 LC72131D PLL
INTERFACE
DO
CL
DI
CE
TM-BASE
AM OSC
S-CURVE
AM RF AMP
FM IF
AM MIX
AM/FM IF BUFFER
AM/FM
IF-BO
AM IF OUT
L772 MW IF ADJ.
AM IF IN
AM IF
AM DET
AGC
AM LBO
TP2 CLK
L771 DC BALANCE ADJ.
+B
FM DET
PILOT DET
MONO
TUNING DRIVE
DECODER
ST DRIVE
IC771 LA1837NL DECODER
L-OUT
L-IN
R-OUT
R-IN
TP7 RCH
TP6 LCH
CN701
TU-L
TU-R
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
TUNER VM
TU-ON
FROM A MAIN C.B CN604

BLOCK DIAGRAM – 3 (MAIN / FRONT)



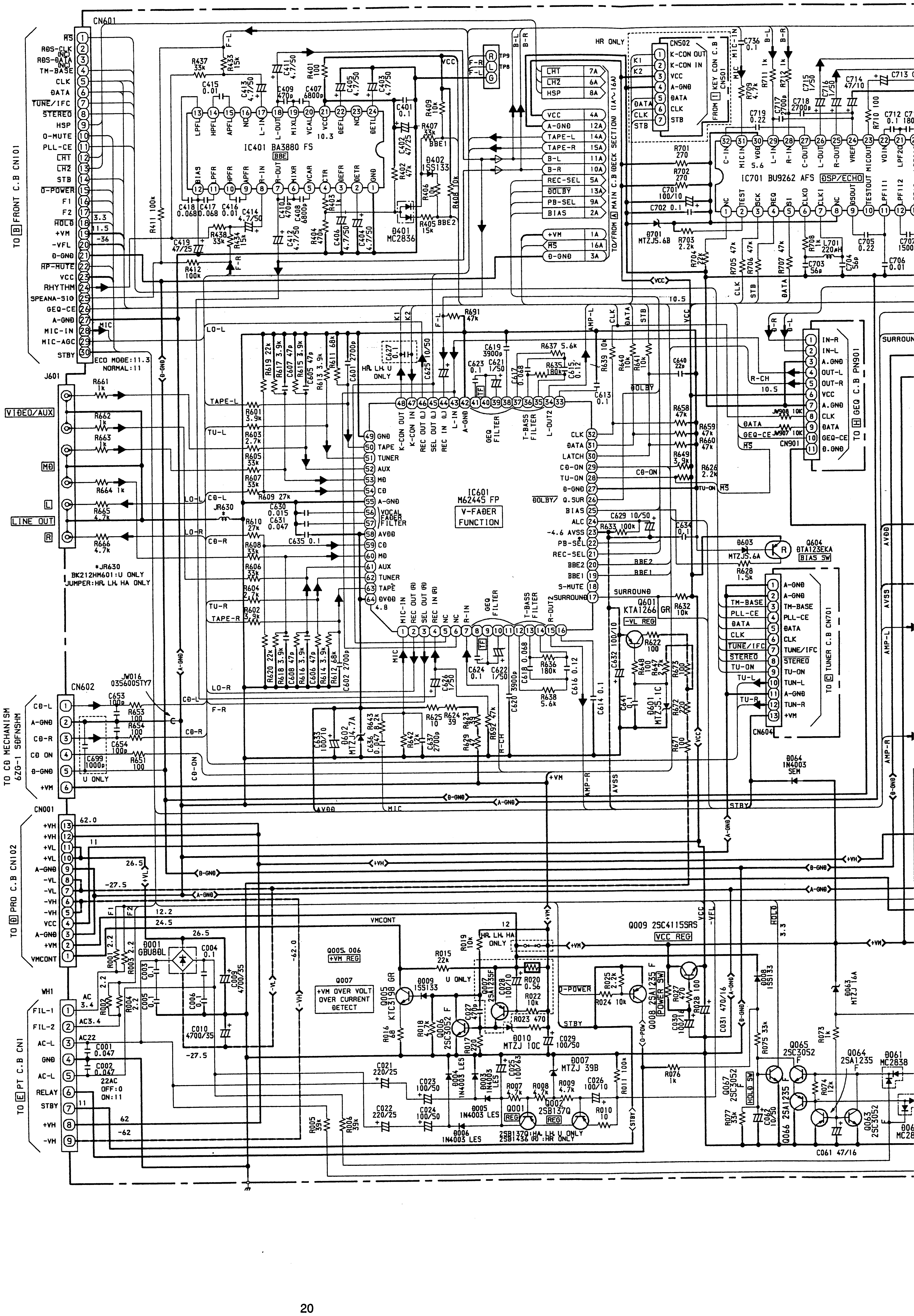
L HEAD-2 C.B
CON351
CN351
DECK 2
L CH
R CH
PIN351
BIAS OSC Q358, Q359
BIAS OSC SW Q357
BIAS
REC/PB SW Q351, Q353 Q354, Q355
A MAIN C.B
+10.0
DOLBY
K HEAD-1 C.B
CN301
DECK 1
PIN301
IC303 BA7762AFS
REC/PB AMP
SFR306
REC/PB SENS
IC302 CXA1553P
DOLBY AMP
TAPE-R
TO CD MECHANISM 6ZG-1 SOFNSHM
TO J DECK C.B CON105
CN701
GND
CLK (CD)
XLT
IO-BUSY
DATA (CD)
SENS/ CD-LED
SUBQ-CLK
SUBQ-DATA
I-CDSW
O-CLOSE
O-OPEN
O-DISH FWD
O-DISH REV
I-DISH
VREF
MOTOR SW Q701
SOL2 SW Q702
SOL1 SW Q703
DIODE MATRIX
FL101
P1～P39 G1～G13
F1
F2
KEY SCAN SW Q301
CN101
CN601
CD LIGHT
LED SW Q311
LED 351～353
LED 331～333
CD KEY LED
LED 311～315
CN302
F KEY C.B
CN301
LED MATRIX
SHIFT REGISTOR IC401, 402
STBY
LED101 STBY LED
SW Q109
POWER SW Q108
VOLUME ENCODER SW101
LED521 LED522
CN503
CN502
SW501
MULTI JOG
G JOG C.B
RESET Q102
CLOCK SHIFT Q101
L101
9.43MHZ
KEY MATRIX
IC101 LC876580W- 5K75
MICRO-COMPUTER
O:NCH OD
X:PULL DOWN RESISTOR 100K TO VP
MIC LEVEL AGC Q601, Q602
MIC AMPLIFIER Q603, 604
J601
J602
MIC 2
MIC 1
IC801 BU990-03FS
RHYTHM IC
MIXOUT
RHYTHM
MIC
MIC-AGC
IC380 BA3835F
SPECTRUM ANALYZER
I-SPEANA
IC102 SPS-442-1-W
VD
GND
REMOTE SENSOR

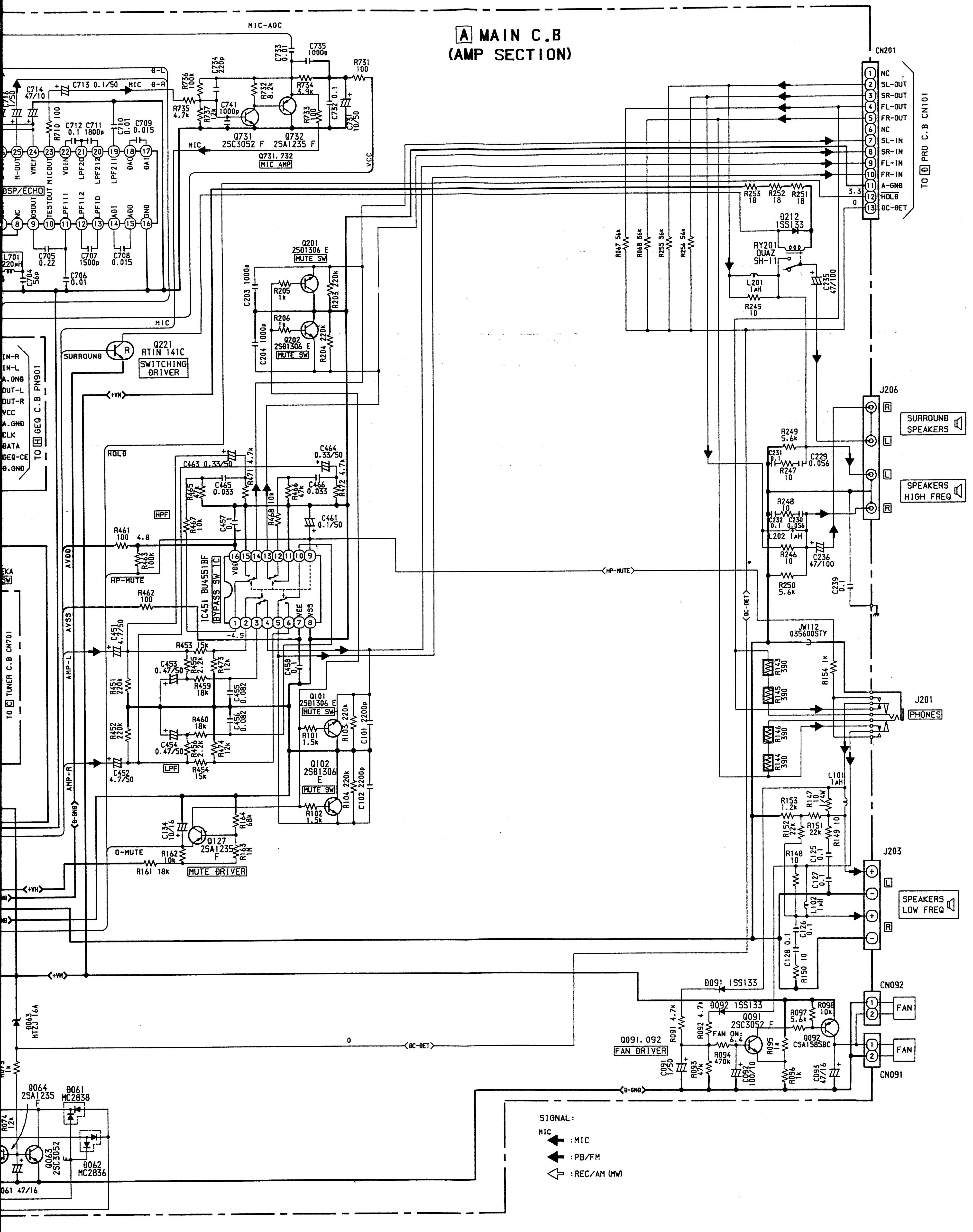
Aiwa 3461



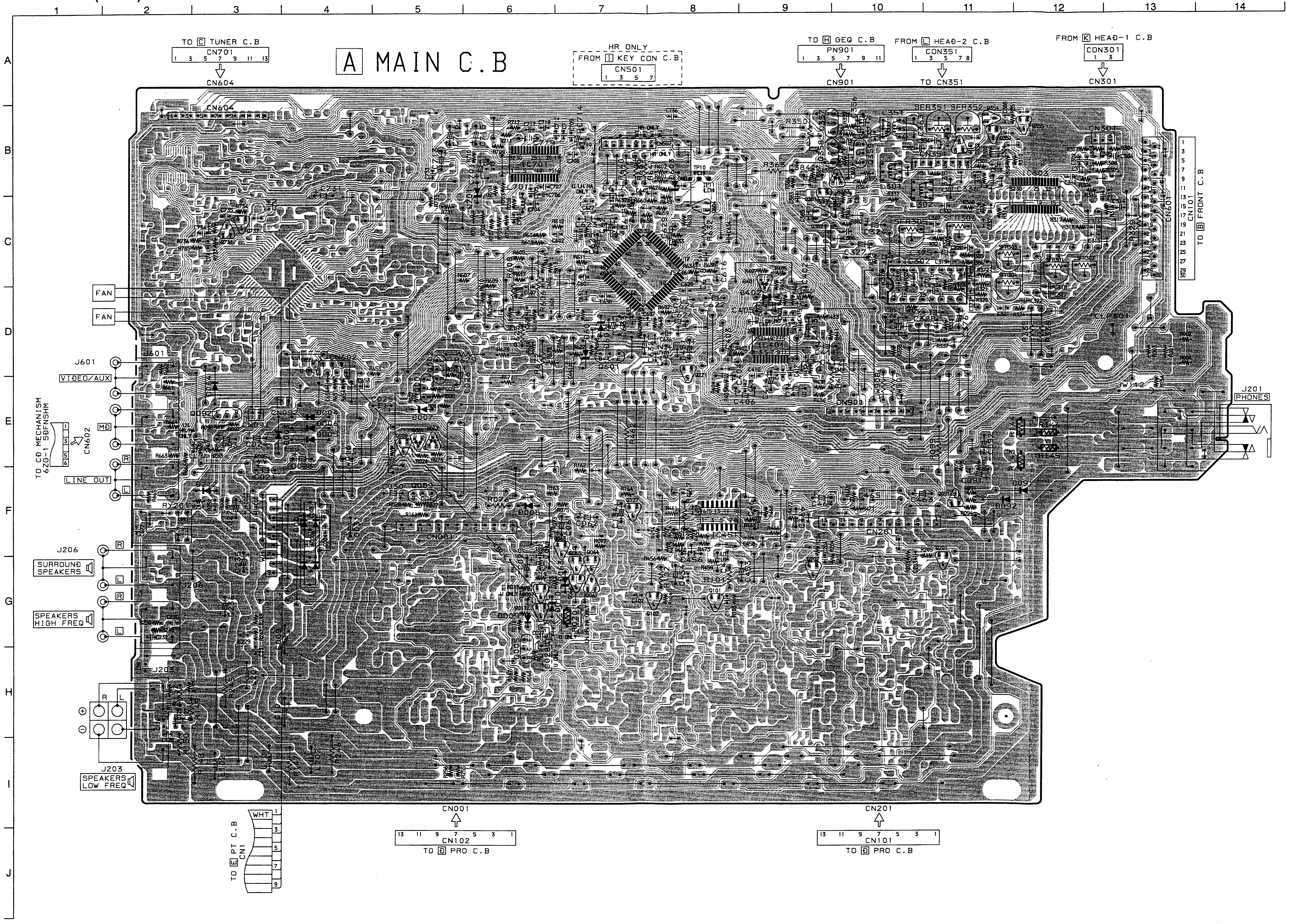
H GEQ C.B
I KEY CON C.B
<HR ONLY>
CON602
TO CD MECHANISM 6Z0-1 SDFNSHM
+VM
D-GND
CD-ON
CD-R
A-GND
CD-L
J601
VIDEO/AUX
MD
LINE OUT
TO C TUNER C.B CN701
STEREO
PLL-CE
DATA
CLK
TUNE/IFC
TM-BASE
TU-ON
TU-R
TU-L
TAPE-L
MS LEVEL DET Q381, Q382
REC/PB SENS ADJ.
SFR305
IC901 M62449FP GEQ
PN901
CN901
IC501 M65847AFP KEYCON
CN501
CN502
IC601 M62445FP V-FADER
IC401 BA3880FS BBE
IC701 BU9262AFS DSP/ECHO
MIC AMP Q731 Q732
Q221 SWITCHING DRIVER
RY201 RELAY
J206
SURROUND SPEAKERS
SPEAKERS HIGH FREQ
J201
PHONES
J203
SPEAKERS LOW FREQ
CN601
IC451 BU4551BF BY PASS SW IC
HP-MUTE
AMP-R
AMP-L
HPF
LPF
MUTE SW Q101
MUTE SW Q102
MUTE SW Q201
MUTE SW Q202
Q127 MUTE DRIVER
AC-DET DC-DET HOLD-SW Q067
CN201
CN101
CN102
CN001
Q101, 102 +VM REGULATOR
Q009 VCC REG
POWER SWITCH Q008
-VFL REG Q001, 002
D001
WH001
POWER AMP Q313, 315
POWER AMP Q314, 316
POWER AMP Q213, 219
POWER AMP Q214, 220
OVER LOAD DET Q317 Q318
DC DET Q506 Q507 Q601 Q602
OVER LOAD DET Q221 Q222
Q501, 503 504, 502 505 (VL/VH SW)
CN103
D PRO C.B
<HR, LH, HA>
CN1
PT1 MAIN
PT2 SUB
D101
D102
PN103
RY101
T101
T102
AC 120V/220-230/240V 50/60HZ
SW101 AC VOLTAGE
E PT C.B
<U>
AC 120V 60HZ

SCHEMATIC DIAGRAM – 1 (MAIN 1 / 2 : AMP)


CN601
TO B FRONT C.B CN101
IC401 BA3880 FS
BBE
IC701 BU9262 AFS
DSP/ECHO
CN502
FROM I KEY CON C.B CN501
HR ONLY
TO/FROM A MAIN C.B (DECK SECTION) (1A~16A)
IC601 M62445 FP
V-FADER FUNCTION
TO H GEQ C.B PN901
CN901
TO C TUNER C.B CN701
CN604
J601
VIDEO/AUX
MD
LINE OUT
ECO MODE:11.3
NORMAL:11
*JR630
BK212HM601:U ONLY
JUMPER:HR, LH, HA ONLY
CN602
JW016
035600STY7
TO CD MECHANISM 62G-1 SBFNSHM
U ONLY
CN001
TO B PRO C.B CN102
WH1
TO E PT C.B CN1
D001 GBU8DL
Q005, 006 +VM REG
Q007 +VM OVER VOLT OVER CURRENT DETECT
Q005 KTC3198 GR
Q006 2SC3052 F
Q001 2SB137Q
Q002 2SB137Q
2SB1370:HA, LH, U ONLY
2SB1436 (R) :HR ONLY
Q008 2SA1235 F
POWER SW
Q009 2SC4115SRS
VCC REG
Q601 KTA1266 GR
-VL REG
Q603 MTZJ5.6A
Q604 DTA123EKA
BIAS SW
D064 1N4003 SEM
Q065 2SC3052
Q064 2SA1235
Q066 2SA1235
Q067 2SC3052
HOLD SW
D061 MC2838
SURROUND
STBY
VMCONT
AC 3.4
22AC OFF:0 ON:11

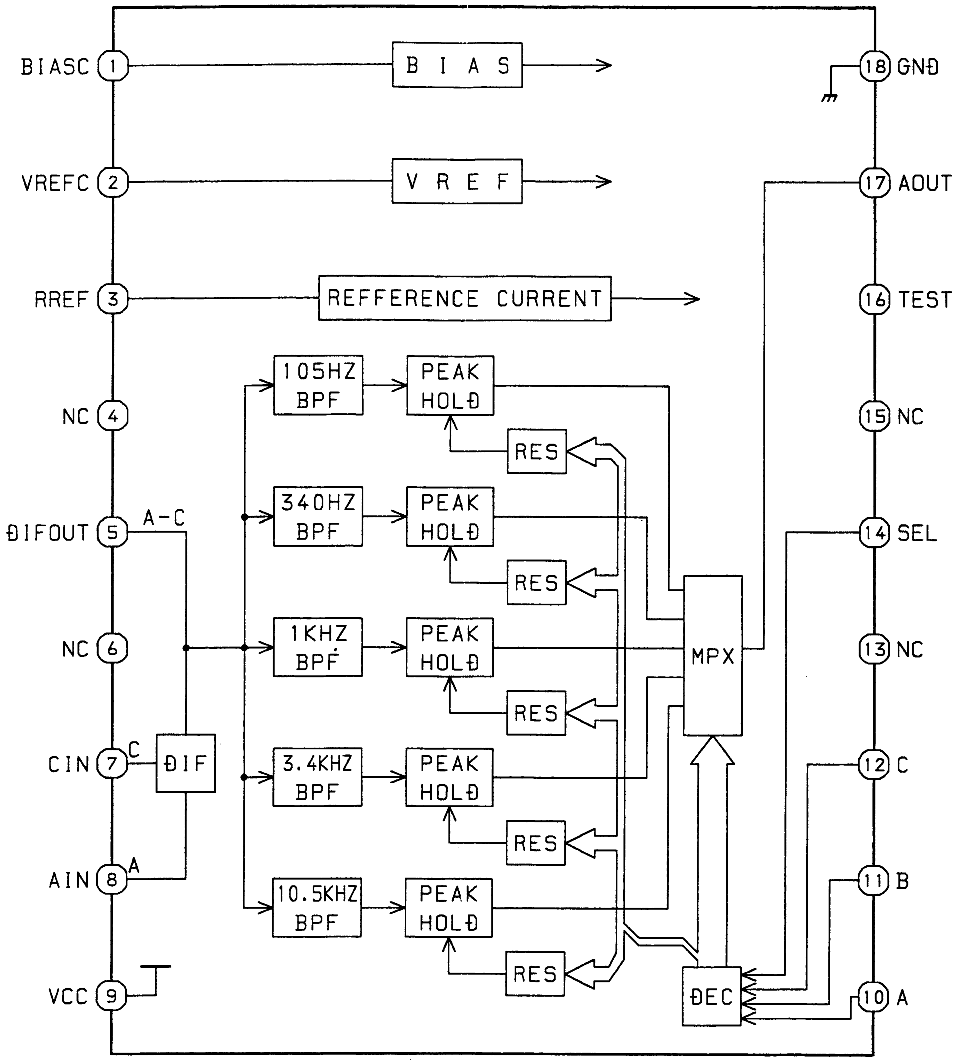

A MAIN C.B
(AMP SECTION)
MIC-AGC
CN201
NC
SL-OUT
SR-OUT
FL-OUT
FR-OUT
NC
SL-IN
SR-IN
FL-IN
FR-IN
A-GND
HOLD
DC-DET
TO D PRO C.B CN101
DSP/ECHO
Q731, 732
MIC AMP
Q731 2SC3052 F
Q732 2SA1235 F
Q201 2SD1306 E
MUTE SW
Q202 2SD1306 E
MUTE SW
Q221 RTIN 141C
SWITCHING DRIVER
SURROUND
TO H GEQ C.B PN901
TO C TUNER C.B CN701
IC451 BU4551BF
BYPASS SW IC
HPF
LPF
HP-MUTE
AVDD
AVSS
AMP-L
AMP-R
D-GND
Q101 2SD1306 E
MUTE SW
Q102 2SD1306 E
MUTE SW
Q127 2SA1235 F
MUTE DRIVER
D-MUTE
RY201 DUAZ SH-11
D212 1SS133
J206
SURROUND SPEAKERS
SPEAKERS HIGH FREQ
JW112 0356005TY
J201
PHONES
J203
SPEAKERS LOW FREQ
CN092
FAN
CN091
D091 1SS133
D092 1SS133
Q091 2SC3052 F
Q092 CSA1585BC
Q091, 092
FAN DRIVER
FAN ON: 6.4
D063 MTZJ 16A
Q064 2SA1235 F
D061 MC2838
Q063 2SC3052 F
D062 MC2836
+VH
DC-DET
SIGNAL:
:MIC
:PB/FM
:REC/AM (MW)

WIRING – 1 (MAIN)

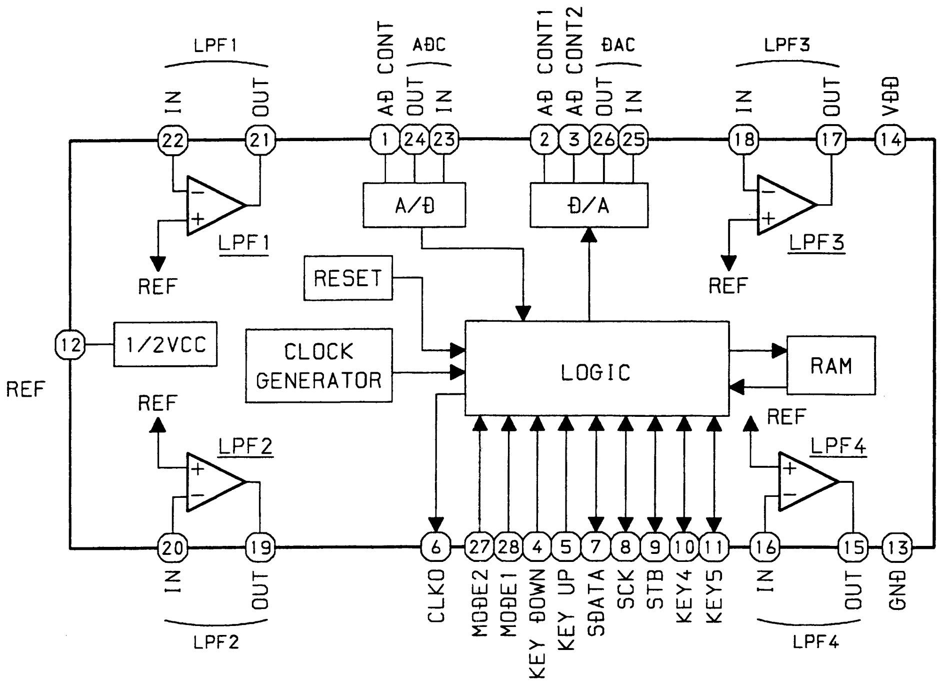

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
A MAIN C.B
TO C TUNER C.B
CN701
1 3 5 7 9 11 13
CN604
HR ONLY
FROM I KEY CON C.B
CN501
1 3 5 7
TO H GEQ C.B
PN901
1 3 5 7 9 11
CN901
FROM L HEAD-2 C.B
CON351
1 3 5 7 8
TO CN351
FROM K HEAD-1 C.B
CON301
1 3
CN301
CN101
TO B FRONT C.B
1 3 5 7 9 11 13 15 17 19 21 23 25 27
FAN
FAN
J601
VIDEO/AUX
TO CD MECHANISM
6Z0-1 S0FNSHM
CN602
MD
R
L
LINE OUT
J206
SURROUND SPEAKERS
R
L
SPEAKERS HIGH FREQ
R
L
J202
R
L
⊕
⊖
J203
SPEAKERS LOW FREQ
J201
PHONES
TO E PT C.B
CN1
WHT
1 3 5 7 9
CN001
CN102
13 11 9 7 5 3 1
TO D PRO C.B
CN201
CN101
13 11 9 7 5 3 1
TO D PRO C.B
IC701
IC401
IC451
IC303
CN901
CN001
CN201
CN603
CN605
CN301
CN351
RY201

IC BLOCK DIAGRAM – 2

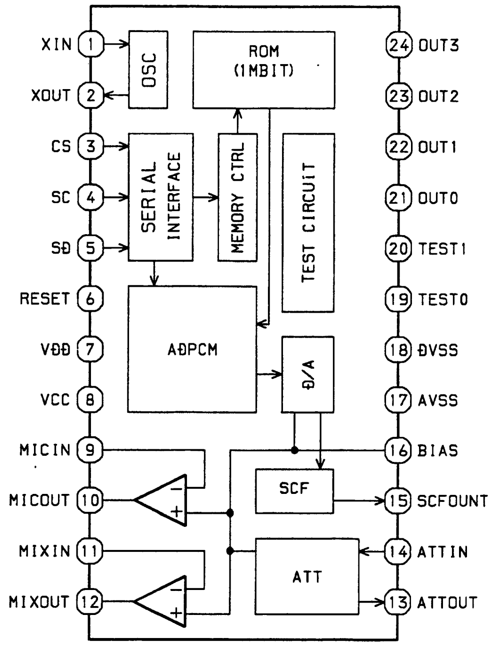
IC, BA3835F


BIASC 1
BIAS
VREFC 2
VREF
RREF 3
REFFERENCE CURRENT
NC 4
DIFOUT 5
A-C
NC 6
CIN 7
C
DIF
AIN 8
A
VCC 9
105HZ BPF
340HZ BPF
1KHZ BPF
3.4KHZ BPF
10.5KHZ BPF
PEAK HOLD
RES
MPX
DEC
18 GND
17 AOUT
16 TEST
15 NC
14 SEL
13 NC
12 C
11 B
10 A

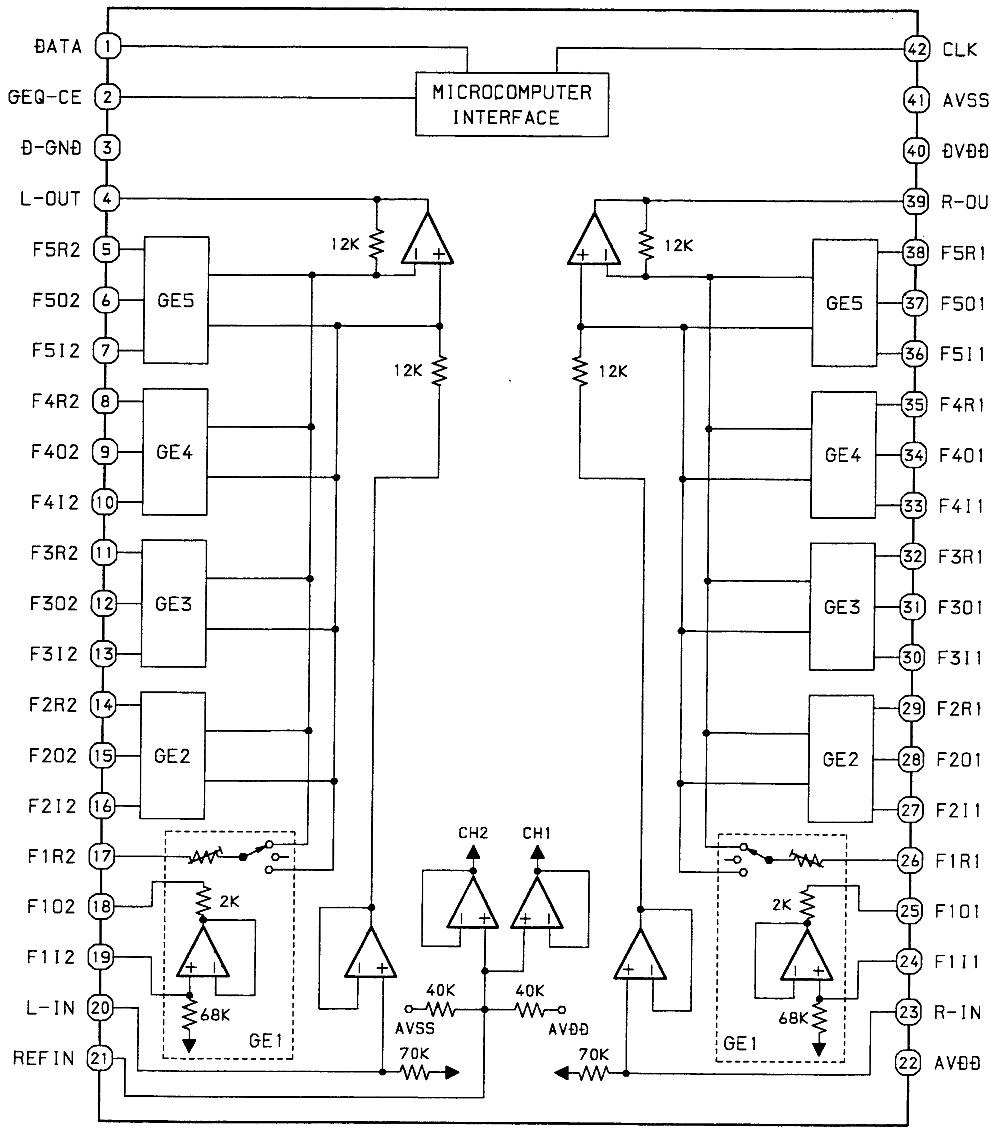
IC, M65847AFP <HR ONLY>


LPF1
IN
OUT
22
21
ADC
AD CONT
OUT
IN
1
24
23
DAC
AD CONT1
AD CONT2
OUT
IN
2
3
26
25
LPF3
IN
OUT
VDD
18
17
14
A/D
D/A
LPF1
REF
LPF3
REF
RESET
CLOCK GENERATOR
LOGIC
RAM
12
1/2VCC
REF
REF
LPF2
LPF4
REF
20
19
IN
OUT
LPF2
6
27
28
4
5
7
8
9
10
11
16
15
13
CLKO
MODE2
MODE1
KEY DOWN
KEY UP
SDATA
SCK
STB
KEY4
KEY5
IN
OUT
GND
LPF4

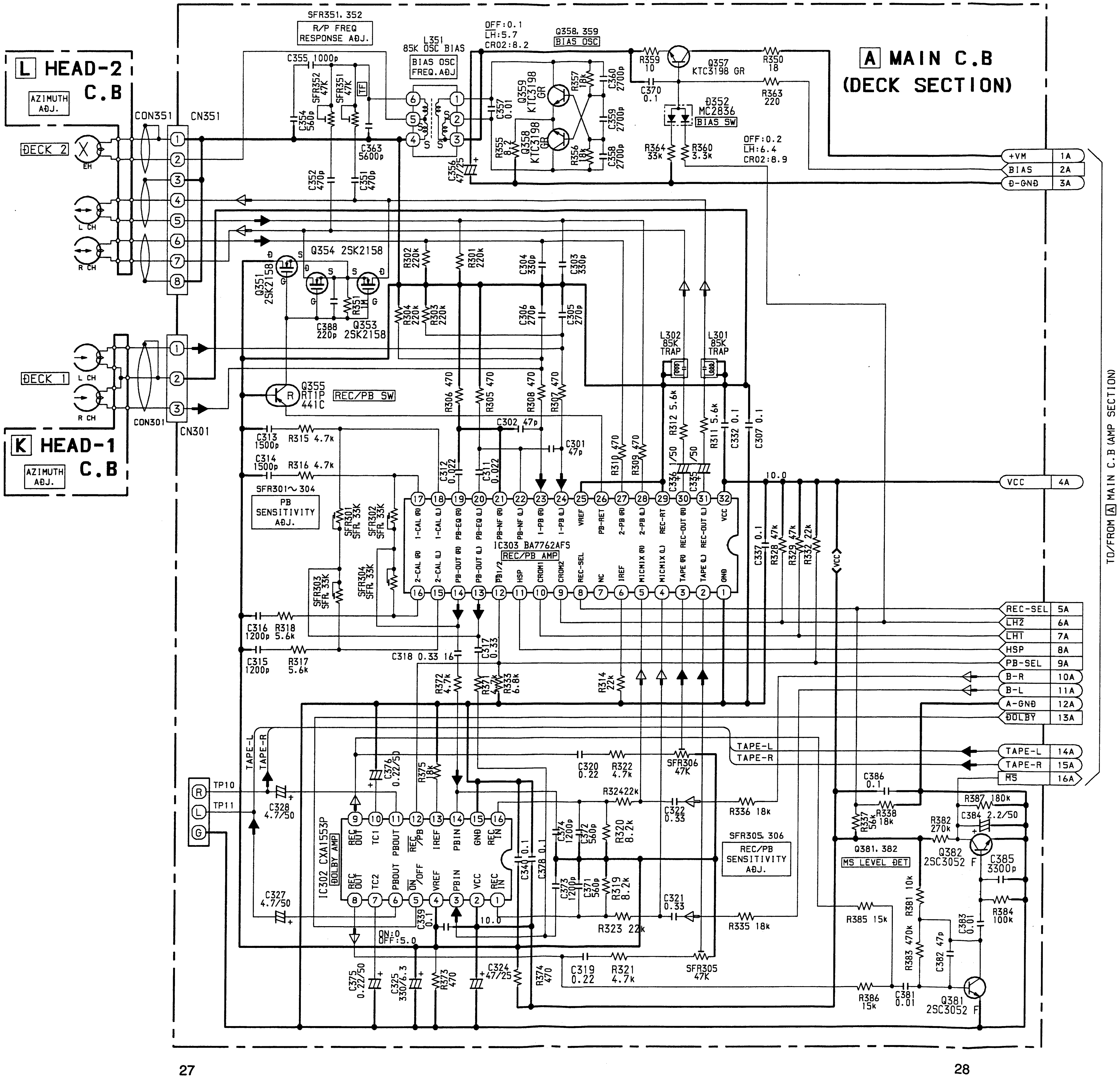
IC, BU9990-03FS


XIN 1
XOUT 2
CS 3
SC 4
SD 5
RESET 6
VDD 7
VCC 8
MICIN 9
MICOUT 10
MIXIN 11
MIXOUT 12
OSC
ROM (1MBIT)
SERIAL INTERFACE
MEMORY CTRL
TEST CIRCUIT
ADPCM
D/A
SCF
ATT
24 OUT3
23 OUT2
22 OUT1
21 OUT0
20 TEST1
19 TEST0
18 DVSS
17 AVSS
16 BIAS
15 SCFOUNT
14 ATTIN
13 ATTOUT

IC, M62449FP

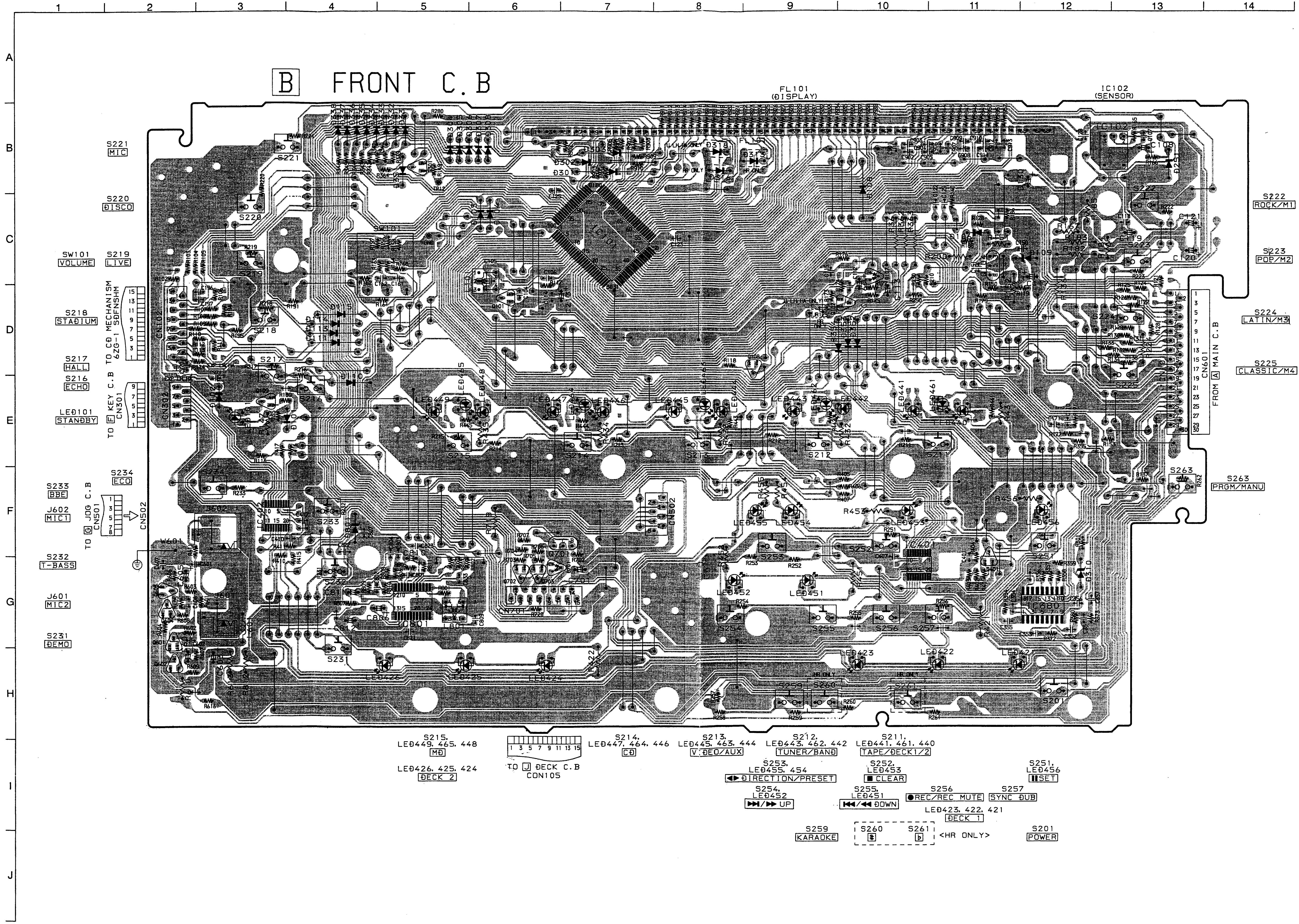

DATA 1
GEQ-CE 2
D-GND 3
L-OUT 4
F5R2 5
F502 6
F512 7
F4R2 8
F402 9
F412 10
F3R2 11
F302 12
F312 13
F2R2 14
F202 15
F212 16
F1R2 17
F102 18
F112 19
L-IN 20
REFIN 21
MICROCOMPUTER INTERFACE
12K
GE5
GE4
GE3
GE2
GE1
2K
68K
CH2
CH1
40K
40K
AVSS
AVDD
70K
70K
42 CLK
41 AVSS
40 DVDD
39 R-OUT
38 F5R1
37 F501
36 F511
35 F4R1
34 F401
33 F411
32 F3R1
31 F301
30 F311
29 F2R1
28 F201
27 F211
26 F1R1
25 F101
24 F111
23 R-IN
22 AVDD

SCHEMATIC DIAGRAM – 2 (MAIN 2 / 2 : DECK)

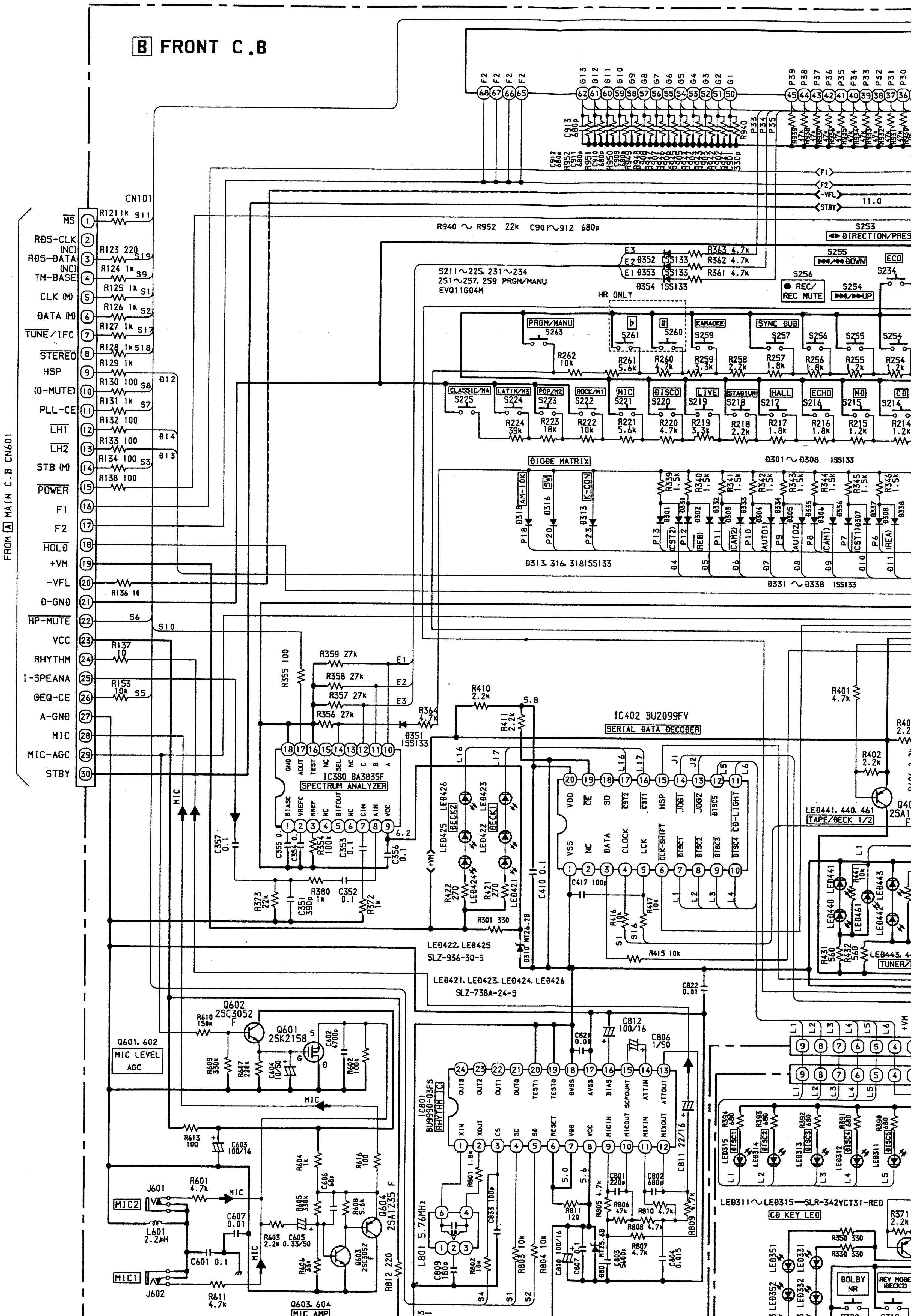


L HEAD-2 C.B
AZIMUTH ADJ.
K HEAD-1 C.B
AZIMUTH ADJ.
DECK 2
DECK 1
L CH
R CH
EH
CON351
CN351
CON301
CN301
A MAIN C.B (DECK SECTION)
SFR351, 352 R/P FREQ RESPONSE ADJ.
L351 85K OSC BIAS
BIAS OSC FREQ. ADJ
OFF:0.1 LH:5.7 CR02:8.2
Q358, 359 BIAS OSC
Q357 KTC3198 GR
D352 MC2836 BIAS SW
OFF:0.2 LH:6.4 CR02:8.9
Q358 KTC3198 GR
Q359 KTC3198 GR
Q354 2SK2158
Q351 2SK2158
Q353 2SK2158
Q355 RT1P 441C
REC/PB SW
SFR301~304 PB SENSITIVITY ADJ.
IC303 BA7762AFS REC/PB AMP
L302 85K TRAP
L301 85K TRAP
IC302 CXA1553P DOLBY AMP
SFR305, 306 REC/PB SENSITIVITY ADJ.
Q381, 382 MS LEVEL DET
Q381 2SC3052 F
Q382 2SC3052 F
ON:0 OFF:5.0
TP10
TP11
TAPE-L
TAPE-R
+VM 1A
BIAS 2A
D-GND 3A
VCC 4A
REC-SEL 5A
LH2 6A
LH1 7A
HSP 8A
PB-SEL 9A
B-R 10A
B-L 11A
A-GND 12A
DOLBY 13A
TAPE-L 14A
TAPE-R 15A
MS 16A
TO/FROM A MAIN C.B (AMP SECTION) (1A~16A)

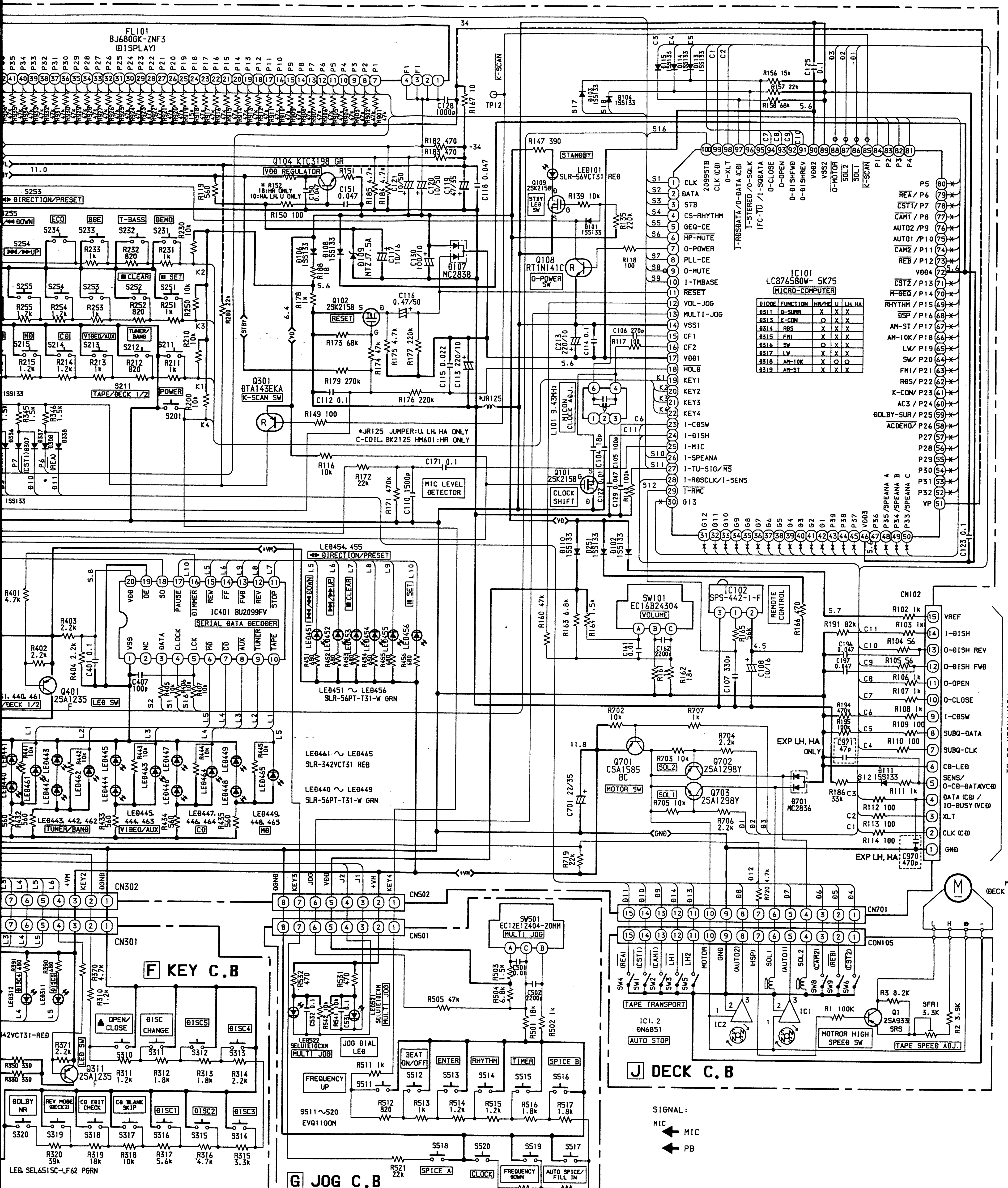
WIRING – 2 (FRONT)


B FRONT C.B
FL101 (DISPLAY)
IC102 (SENSOR)
S221 MIC
S220 DISCO
SW101 VOLUME
S219 LIVE
S218 STADIUM
S217 HALL
S216 ECHO
LED101 STANDBY
TO CD MECHANISM 6ZG-1 SDFNSHM
TO F KEY C.B CN301
CN102
CN302
S234 ECO
S233 BBE
J602 MIC1
TO G JOG C.B CN501
CN502
S232 T-BASS
J601 MIC2
S231 DEMO
S222 ROCK/M1
S223 POP/M2
S224 LATIN/M3
S225 CLASSIC/M4
FROM A MAIN C.B CN601
S263 PRGM/MANU
S215, LED449, 465, 448 MD
LED426, 425, 424 DECK 2
TO J DECK C.B CON105
S214, LED447, 464, 446 CD
S213, LED445, 463, 444 VIDEO/AUX
S212, LED443, 462, 442 TUNER/BAND
S211, LED441, 461, 440 TAPE/DECK1/2
S253, LED455, 454 ◀▶ DIRECTION/PRESET
S252, LED453 ■ CLEAR
S251, LED456 ❚❚SET
S254, LED452 ▶▶❘/▶▶ UP
S255, LED451 ❘◀◀/◀◀ DOWN
S256 ●REC/REC MUTE
S257 SYNC DUB
LED423, 422, 421 DECK 1
S259 KARAOKE
S260 ♯
S261 ♭
<HR ONLY>
S201 POWER
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J

SCHEMATIC DIAGRAM - 3 (FRONT)

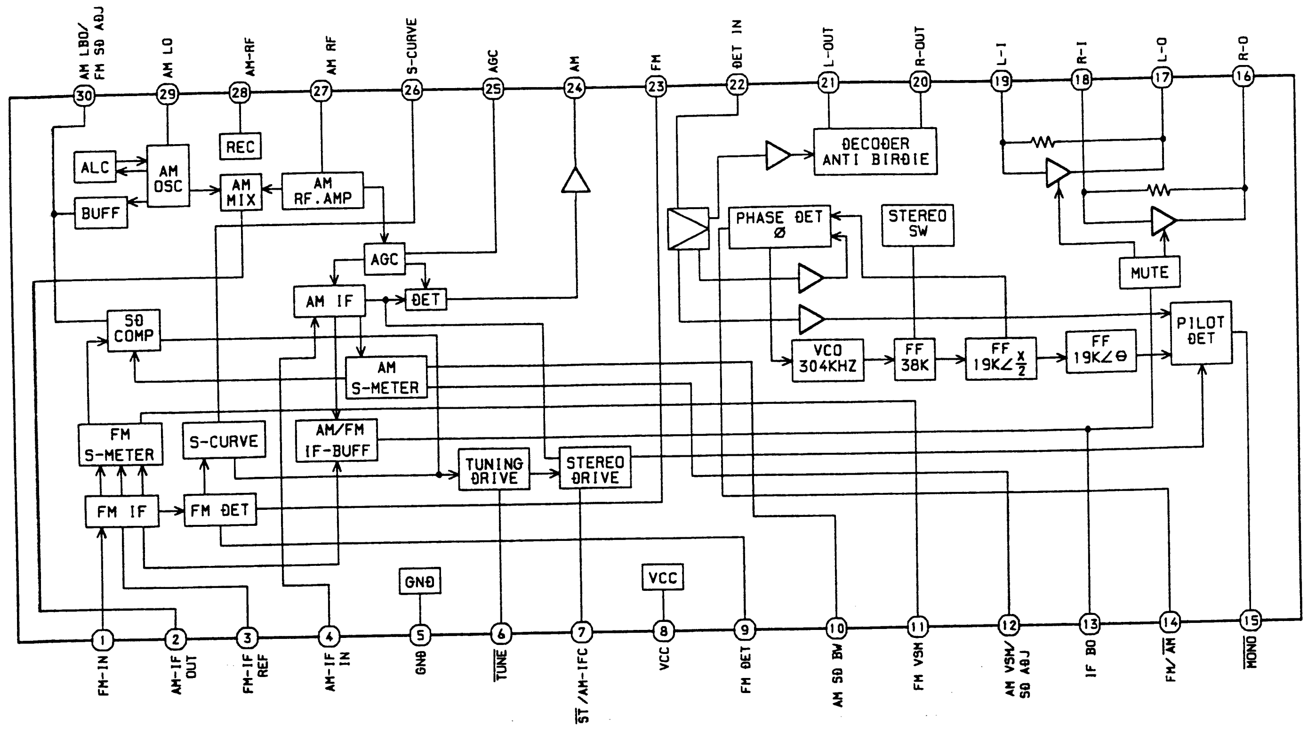

B FRONT C.B
CN101
FROM A MAIN C.B CN601
MS
RDS-CLK
(NC)
RDS-DATA
(NC)
TM-BASE
CLK (M)
DATA (M)
TUNE/IFC
STEREO
HSP
(D-MUTE)
PLL-CE
LH1
LH2
STB (M)
POWER
F1
F2
HOLD
+VM
-VFL
D-GND
HP-MUTE
VCC
RHYTHM
I-SPEANA
GEQ-CE
A-GND
MIC
MIC-AGC
STBY
R940 ~ R952 22k C901~912 680p
S211~225, 231~234
251~257, 259 PRGM/MANU
EVQ11G04M
HR ONLY
S253
DIRECTION/PRES
S255
DOWN
S256
REC/
REC MUTE
S254
UP
ECO
S234
PRGM/MANU
S263
S261
S260
KARAOKE
S259
SYNC DUB
S257
S256
S255
S254
CLASSIC/M4
S225
LATIN/M3
S224
POP/M2
S223
ROCK/M1
S222
MIC
S221
DISCO
S220
LIVE
S219
STADIUM
S218
HALL
S217
ECHO
S216
MD
S215
CD
S214
DIODE MATRIX
D301 ~ D308 1SS133
D313, 316, 318 1SS133
D331 ~ D338 1SS133
D352 1SS133
D353 1SS133
D354 1SS133
D351 1SS133
IC380 BA3835F
SPECTRUM ANALYZER
IC402 BU2099FV
SERIAL DATA DECODER
LE0422, LE0425
SLZ-936-30-S
LE0421, LE0423, LE0424, LE0426
SLZ-738A-24-S
LE0441, 440, 461
TAPE/DECK 1/2
TUNER
IC801
BU9990-03F5
RHYTHM IC
L801 5.76MHz
Q602
2SC3052
Q601
2SK2158
Q601, 602
MIC LEVEL
AGC
Q603, 604
MIC AMP
Q603
2SC3052
Q604
2SA1235 F
J601
MIC2
L601
2.2µH
C601 0.1
MIC1
J602
R611
4.7k
LE0311 ~ LE0315 -- SLR-342VCT31-RED
CD KEY LED
LE0331 ~ LE0333
LE0351 ~ LE0353 LED SEL6515C-LF
CD
DOLBY
NR
REV MODE
(DECK2)
S320
S319
R320
39k
11.0
5.8
6.2
MT26.28

AIWA 3461

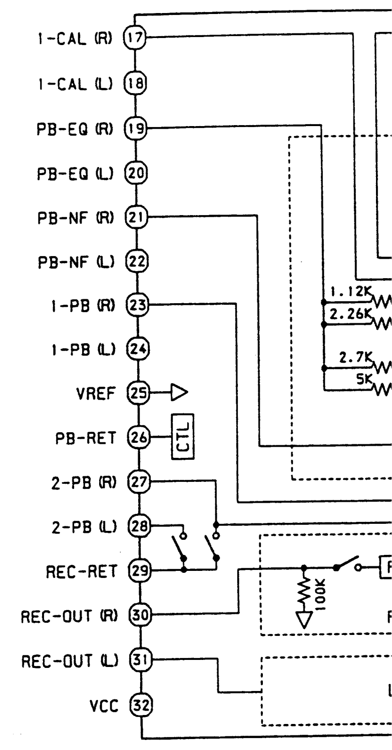

FL101
BJ680GK-ZNF3
(DISPLAY)
Q104 KTC3198 GR
VDD REGULATOR
* R152 18:HR ONLY 10:HA, LH, U ONLY
STANDBY
LED101 SLR-56VCT31 RED
Q109 2SK2158
STBY LED SW
Q108 RT1N141C
O-POWER SW
Q102 2SK2158
RESET
D109 MTZJ7.5A
D107 MC2838
Q301 DTA143EKA
K-SCAN SW
*JR125 JUMPER: U, LH, HA ONLY
C-COIL BK2125 HM601: HR ONLY
MIC LEVEL DETECTOR
Q101 2SK2158
CLOCK SHIFT
L101 9.43MHz
MICON CLOCK ADJ.
IC101
LC876580W- 5K75
MICRO-COMPUTER
CLK
DATA
STB
CS-RHYTHM
GEQ-CE
HP-MUTE
O-POWER
PLL-CE
O-MUTE
I-TMBASE
RESET
VOL-JOG
MULTI-JOG
VSS1
CF1
CF2
VDD1
HOLD
KEY1
KEY2
KEY3
KEY4
I-CDSW
I-DISH
I-MIC
I-SPEANA
I-TU-SIG/MS
I-RDSCLK/I-SENS
I-RMC
G13
P5
REA/P6
CST1/P7
CAM1/P8
AUTO2/P9
AUTO1/P10
CAM2/P11
REB/P12
CST2/P13
M-GEQ/P14
RHYTHM/P15
DSP/P16
AM-ST/P17
AM-10K/P18
LW/P19
SW/P20
FM1/P21
RDS/P22
K-CON/P23
AC3/P24
DOLBY-SUR/P25
ACDEMO/P26
P27
P28
P29
P30
P31
P32
VP
DIODE | FUNCTION | HR/HD | U | LH, HA
D311 | D-SURR | X | X | X
D313 | K-CON | O | X | X
D314 | RDS | X | X | X
D315 | FM1 | X | X | X
D316 | SW | O | X | X
D317 | LW | X | X | X
D318 | AM-10K | X | O | O
D319 | AM-ST | X | O | X
2099STB
CLK (CD)
O-XLT
I-RDSDATA/O-DATA (CD)
I-STEREO/O-SDLK
IFC-TU/I-SDDATA
O-CLOSE
O-OPEN
O-DISHFWD
O-DISHREV
VDD2
VSS2
O-MOTOR
SOL2
SOL1
K-SCAN
TP12
S253 DIRECTION/PRESET
S255 DOWN
S254 UP
ECO BBE T-BASS DEMO
CLEAR SET
MD CD VIDEO/AUX TUNER/BAND
S211 TAPE/DECK 1/2
POWER
IC401 BU2099FV
SERIAL DATA DECODER
LED454, 455 DIRECTION/PRESET
DOWN UP CLEAR SET
LED451 ~ LED456
SLR-56PT-T31-W GRN
Q401 2SA1235
LED SW
LED461 ~ LED465
SLR-342VCT31 RED
LED440 ~ LED449
SLR-56PT-T31-W GRN
TUNER/BAND VIDEO/AUX CD MD
SW101 EC16B24304
VOLUME
IC102 SPS-442-1-F
REMOTE CONTROL
Q701 CSA1585 BC
MOTOR SW
Q702 2SA1298Y
Q703 2SA1298Y
SOL2 SOL1
D701 MC2836
EXP LH, HA ONLY
CN102
VREF
I-DISH
O-DISH REV
O-DISH FWD
O-OPEN
O-CLOSE
I-CDSW
SUBQ-DATA
SUBQ-CLK
CD-LED
SENS/ O-CD-DATA(VCD)
DATA (CD)/ IO-BUSY (VCD)
XLT
CLK (CD)
GND
TO CD MECHANISM 6Z0-1 SDFNSHM
CN302
CN301
CN502
CN501
CN701
CON105
M1 (DECK MOTOR)
F KEY C.B
OPEN/CLOSE
DISC CHANGE
DISC5 DISC4
Q311 2SA1235
DOLBY NR
REV MODE (DECK2)
CD EDIT CHECK
CD BLANK SKIP
DISC1 DISC2 DISC3
LED SEL6515C-LF62 PGRN
42VCT31-RED
SW501 EC12E12404-20MM
MULTI JOG
LED522 SELU1E10CXM MULTI JOG
LED521 SELU1E10CXM MULTI JOG
JOG DIAL LED
FREQUENCY UP
BEAT ON/OFF
ENTER RHYTHM TIMER SPICE B
S511~520
EVQ11G0M
SPICE A
CLOCK
FREQUENCY DOWN
AUTO SPICE/ FILL IN
G JOG C.B
TAPE TRANSPORT
IC1, 2 DN6851
AUTO STOP
Q1 2SA933 SRS
MOTROR HIGH SPEED SW
SFR1 3.3K
TAPE SPEED ADJ.
J DECK C.B
SIGNAL:
MIC
PB

IC BLOCK DIAGRAM – 3

IC, LA1837NL

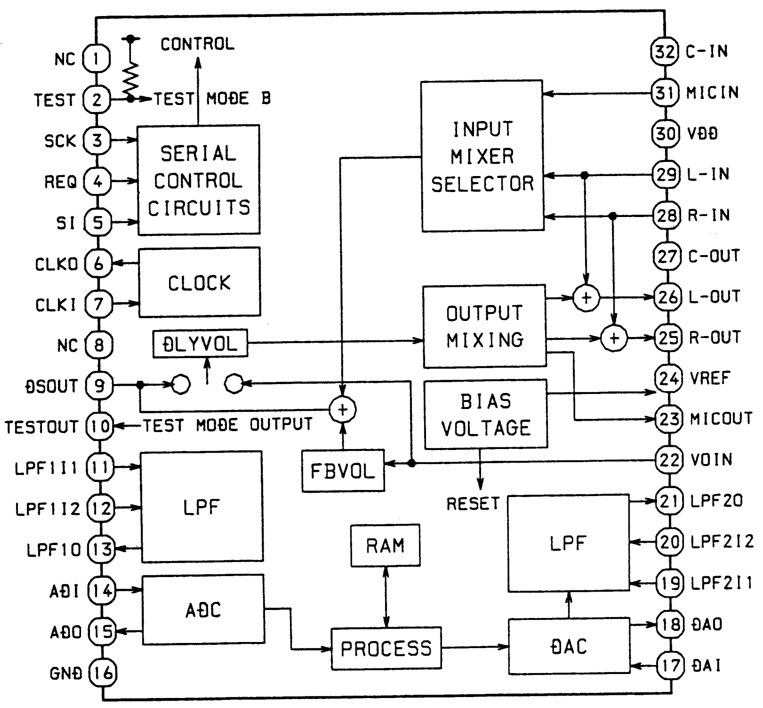

AM LBO/ FM SD ADJ
AM LO
AM-RF
AM RF
S-CURVE
AGC
AM
FM
DET IN
L-OUT
R-OUT
L-I
R-I
L-O
R-O
ALC
AM OSC
BUFF
REC
AM MIX
AM RF.AMP
DECODER ANTI BIRDIE
PHASE DET Ø
STEREO SW
AGC
AM IF
DET
MUTE
SD COMP
VCO 304KHZ
FF 38K
FF 19K∠π/2
FF 19K∠0
PILOT DET
AM S-METER
FM S-METER
S-CURVE
AM/FM IF-BUFF
TUNING DRIVE
STEREO DRIVE
FM IF
FM DET
GND
VCC
FM-IN
AM-IF OUT
FM-IF REF
AM-IF IN
GND
TUNE
ST/AM-IFC
VCC
FM DET
AM SD BW
FM VSM
AM VSM/ SD ADJ
IF BO
FM/AM
MONO

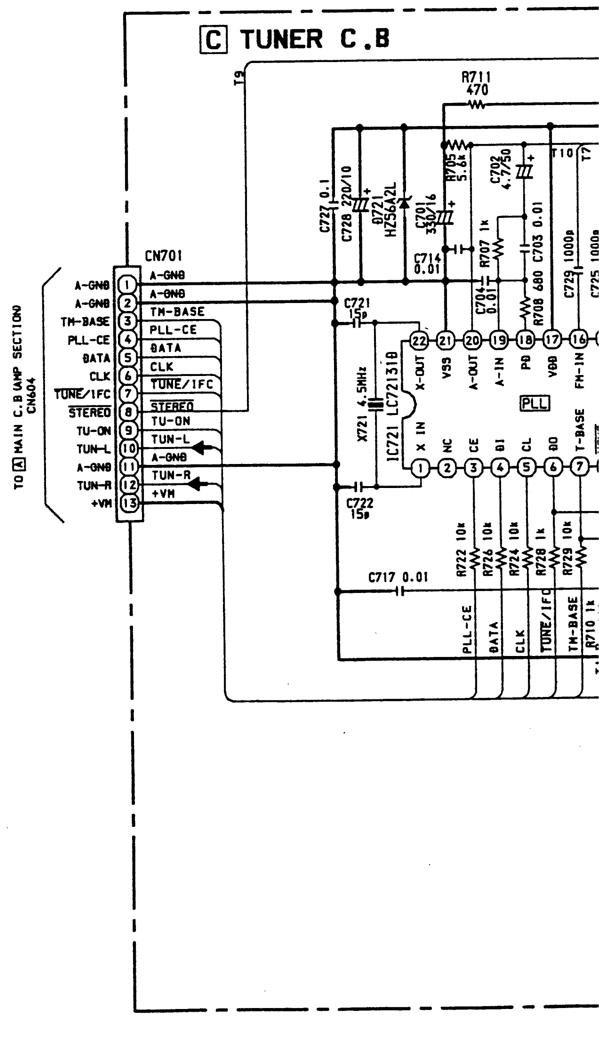
IC, BA7762AFS


I-CAL (R)
I-CAL (L)
PB-EQ (R)
PB-EQ (L)
PB-NF (R)
PB-NF (L)
I-PB (R)
I-PB (L)
VREF
PB-RET
2-PB (R)
2-PB (L)
REC-RET
REC-OUT (R)
REC-OUT (L)
VCC
CTL
1.12K
2.26K
2.7K
5K
100K

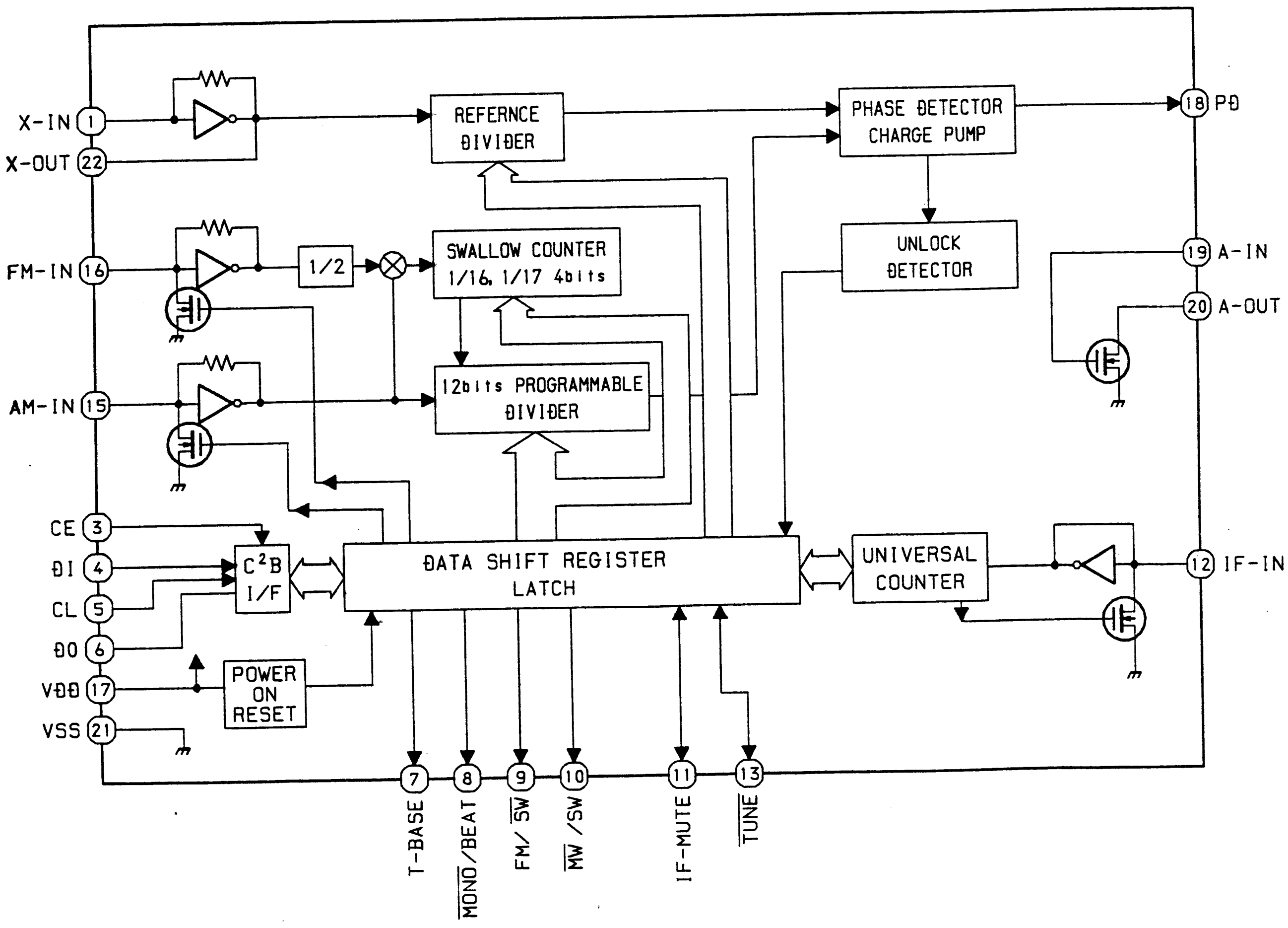
SCHEMATIC DIAGRAM – 4 (TUNER : HR)

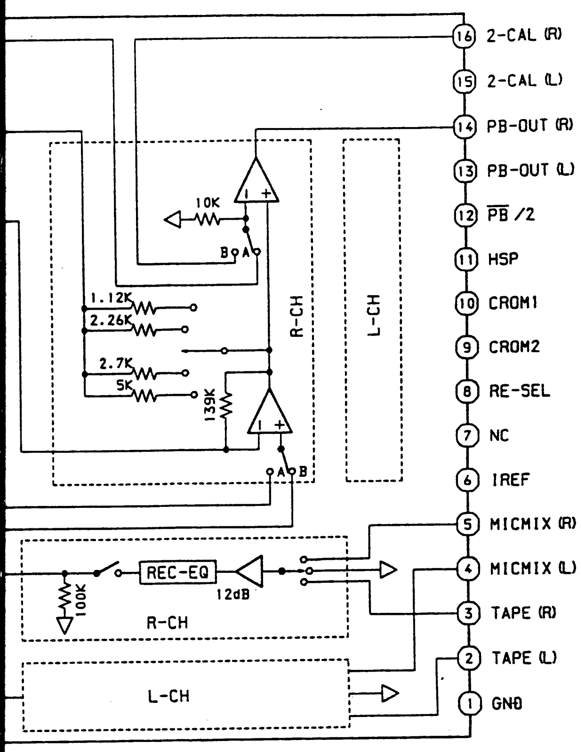
IC, BU9262AFS


NC
TEST
SCK
REQ
SI
CLKO
CLKI
NC
DSOUT
TESTOUT
LPFI1I
LPFI12
LPFIO
ADI
ADO
GND
CONTROL
TEST MODE B
SERIAL CONTROL CIRCUITS
CLOCK
DLYVOL
TEST MODE OUTPUT
FBVOL
LPF
ADC
INPUT MIXER SELECTOR
OUTPUT MIXING
BIAS VOLTAGE
RESET
RAM
PROCESS
LPF
DAC
C-IN
MICIN
VDD
L-IN
R-IN
C-OUT
L-OUT
R-OUT
VREF
MICOUT
VOIN
LPF20
LPF212
LPF211
DAO
DAI

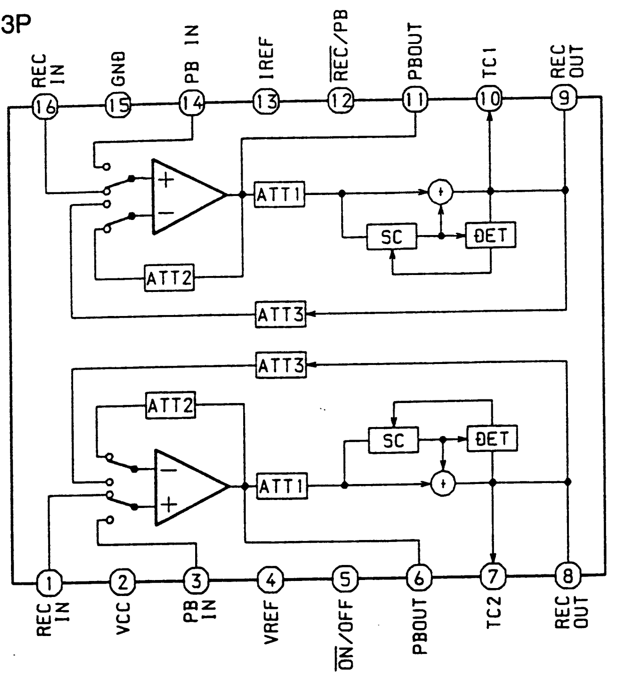

C TUNER C.B
TO A MAIN C.B (AMP SECTION) CN604
CN701
A-GND
A-GND
TM-BASE
PLL-CE
DATA
CLK
TUNE/IFC
STEREO
TU-ON
TUN-L
A-GND
TUN-R
+VM
R711 470
R705 5.6k
C702 4.7/50
C727 0.1
C728 220/10
D721 HZ56A2L
C701 330/16
C714 0.01
R707 1k
C704 0.01
R708 680
C703 0.01
C729 1000p
C725 1000p
C721 15p
C722 15p
X721 4.5MHz
IC721 LC721318
X-OUT
VSS
A-OUT
A-IN
PD
VDD
FM-IN
PLL
X IN
NC
CE
DI
CL
DO
T-BASE
T10
T7
T9
R722 10k
R726 10k
R724 10k
R728 1k
R729 10k
C717 0.01
PLL-CE
DATA
CLK
TUNE/IFC
TM-BASE
R710 1k

IC, LC721331D


X-IN
X-OUT
FM-IN
AM-IN
CE
DI
CL
DO
VDD
VSS
REFERNCE DIVIDER
PHASE DETECTOR CHARGE PUMP
1/2
SWALLOW COUNTER 1/16, 1/17 4bits
UNLOCK DETECTOR
12bits PROGRAMMABLE DIVIDER
C²B I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
POWER ON RESET
PD
A-IN
A-OUT
IF-IN
T-BASE
MONO/BEAT
FM/SW
MW/SW
IF-MUTE
TUNE

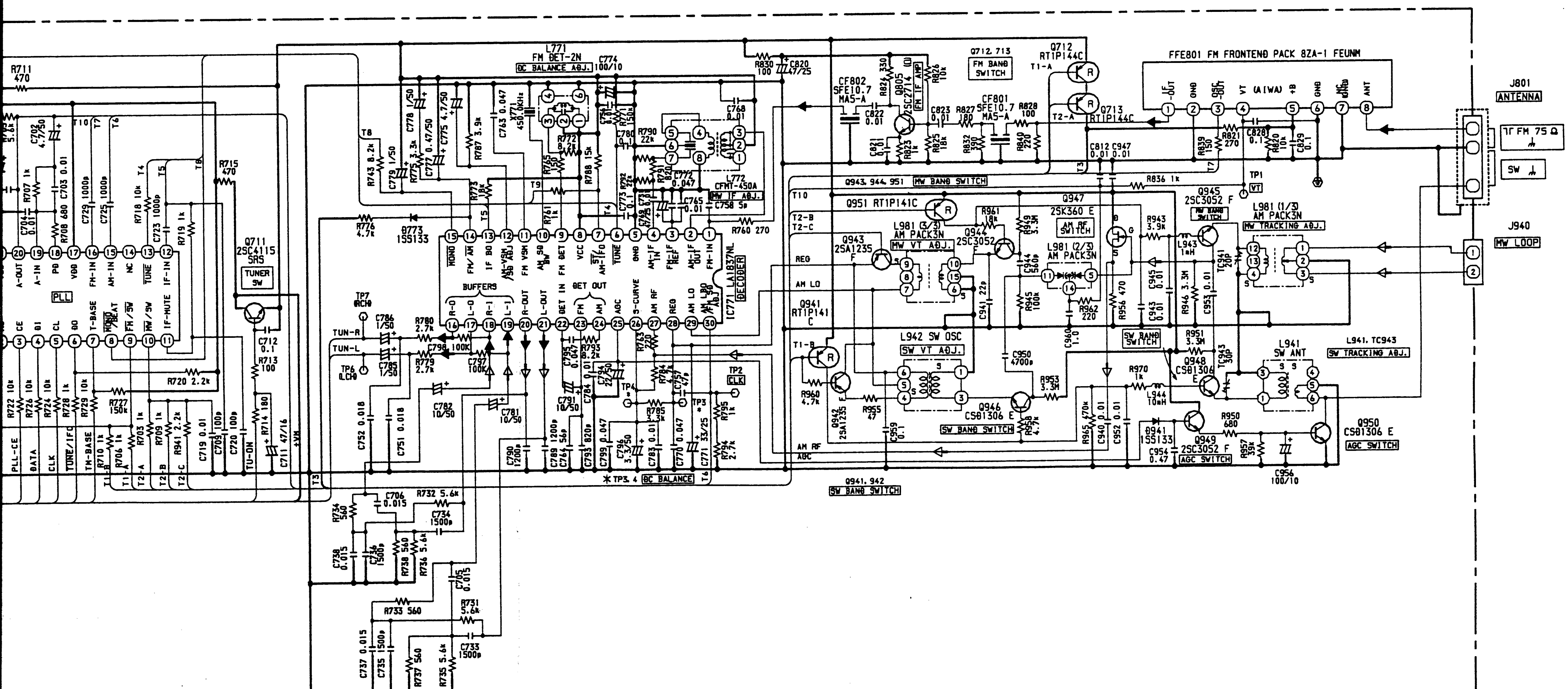

16 2-CAL (R)
15 2-CAL (L)
14 PB-OUT (R)
13 PB-OUT (L)
12 PB /2
11 HSP
10 CROM1
9 CROM2
8 RE-SEL
7 NC
6 IREF
5 MICMIX (R)
4 MICMIX (L)
3 TAPE (R)
2 TAPE (L)
1 GND
10K
B A
1.12K
2.26K
2.7K
5K
139K
A B
R-CH
L-CH
REC-EQ
12dB
100K
R-CH
L-CH

IC, CXA1553P

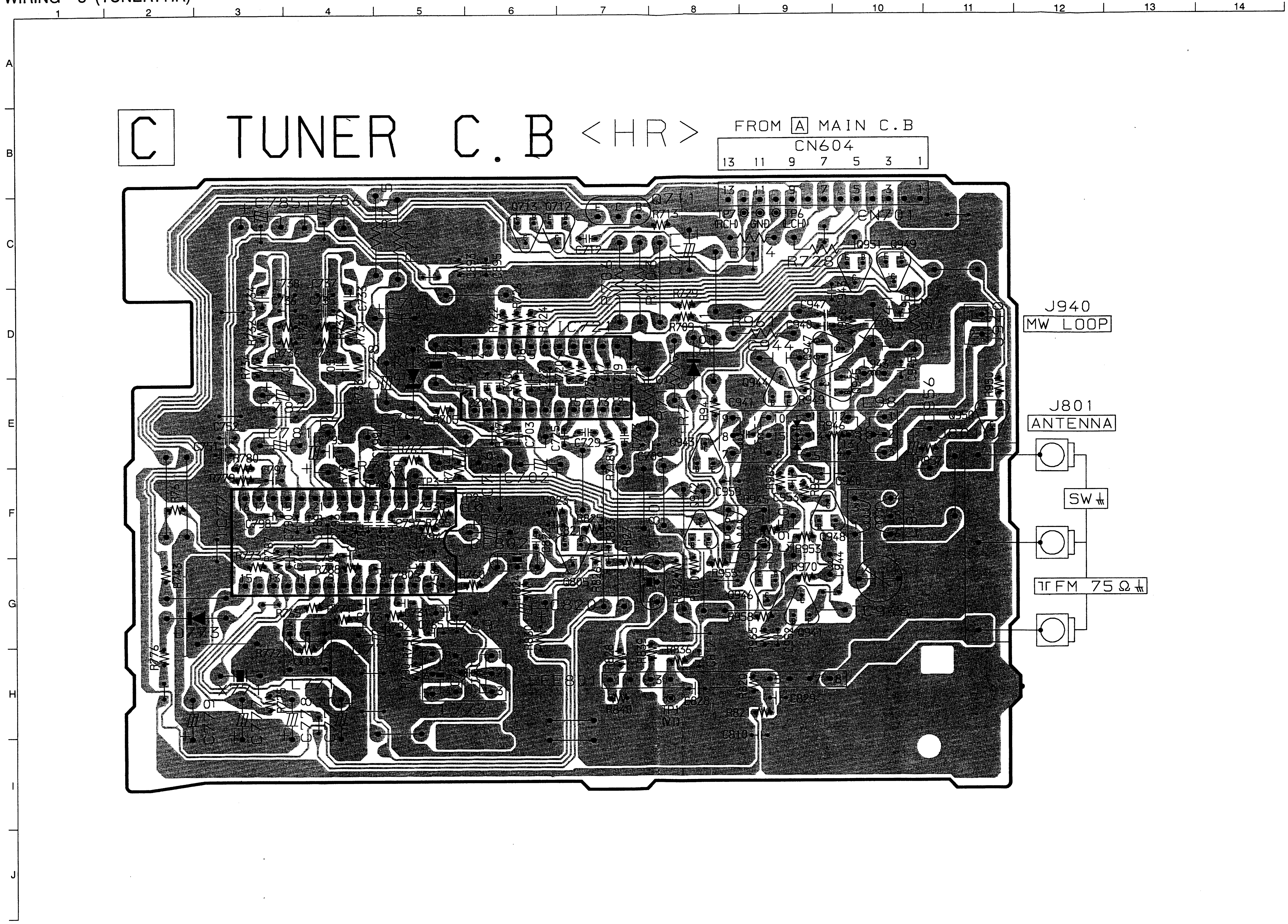

REC IN
GND
PB IN
IREF
REC/PB
PBOUT
TC1
REC OUT
16
15
14
13
12
11
10
9
ATT1
SC
DET
ATT2
ATT3
ATT3
ATT2
SC
DET
ATT1
1
2
3
4
5
6
7
8
REC IN
VCC
PB IN
VREF
ON/OFF
PBOUT
TC2
REC OUT

ATT:Attenuator
SC:Side Chain
DET:Detector

NER : HR)

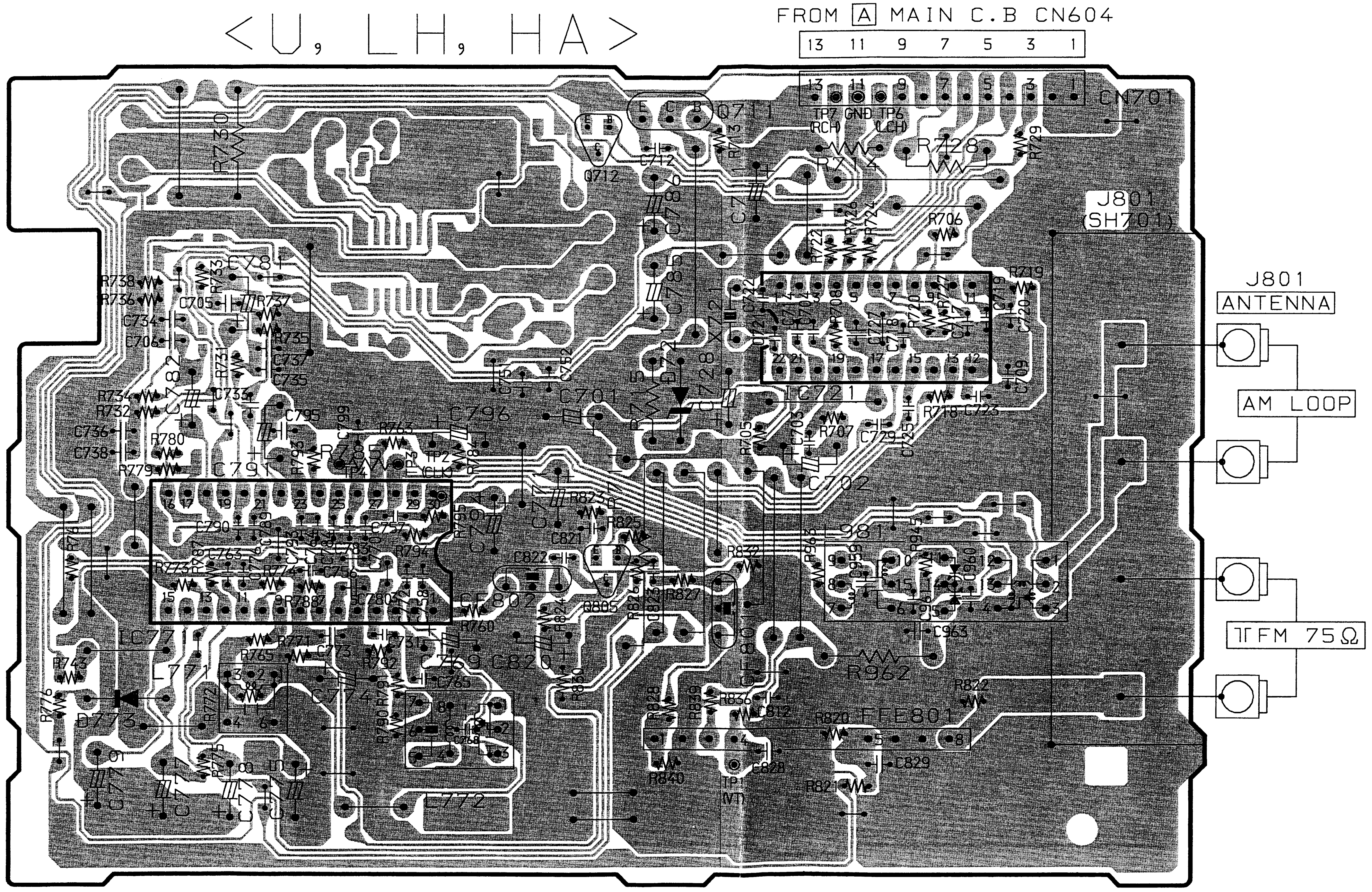

R711 470
L771 FM DET-2N
DC BALANCE ADJ.
C774 100/10
R830 100
C820 47/25
CF802 SFE10.7 MA5-A
C822 0.01
Q805 2SC2714 (O) FM IF AMP
Q712, 713 FM BAND SWITCH
Q712 RT1P144C
Q713 RT1P144C
CF801 SFE10.7 MA5-A
R828 100
FFE801 FM FRONTEND PACK 8ZA-1 FEUNM
IF OUT
GND
OSC OUT
VT
(AIWA)
+B
GND
MC GND
ANT
J801 ANTENNA
FM 75 Ω
SW
J940 MW LOOP
R715 470
Q711 2SC4115 SRS
TUNER SW
IC771 LA1837NL DECODER
BUFFERS
DET OUT
MONO
FM/AM
IF BO
AM SW
FM VSM
AM SD
FM DET
VCC
AM-IFO
TUNE
GND
FM IF IN
AM IF IN
AM IF OUT
FM-IN
R-O
L-O
R-I
L-I
R-OUT
L-OUT
DET IN
FM DET
FM
AM
AGC
S-CURVE
AM RF
REG
AM LO
AM OSC
L772 CFMT-450A
MW IF ADJ.
C758 5p
R760 270
TP7 RCH
TUN-R
TUN-L
TP6 LCH
TP2 CLK
TP3
TP4
TPS, 4 DC BALANCE
PLL
A-OUT
A-IN
VDD
PD
FM-IN
AM-IN
NC
TUNE
IF-IN
T-BASE
MONO BEAT
FM/SW
MW/SW
IF-MUTE
CE
DI
CL
DO
PLL-CE
DATA
CLK
TUNE/IFC
TM-BASE
R720 2.2k
R727 150k
C712 0.1
R713 100
R714 180
C711 47/16
TU-ON
C752 0.018
C751 0.018
C782 10/50
C781 10/50
C706 0.015
R732 5.6k
C734 1500p
R734 560
C738 0.015
C736 1500p
R738 560
R736 5.6k
C735 0.015
R733 560
R731 5.6k
C733 1500p
C737 0.015
C735 1500p
R737 560
R735 5.6k
Q943, 944, 951 MW BAND SWITCH
Q951 RT1P141C
L981 (3/3) AM PACK3N
MW VT ADJ.
Q943 2SA1235
Q944 2SC3052
Q947 2SK360 E
AM RF SWITCH
L981 (2/3) AM PACK3N
Q945 2SC3052 F
MW BAND SWITCH
L981 (1/3) AM PACK3N
MW TRACKING ADJ.
Q941 RT1P141 C
L942 SW OSC
SW VT ADJ.
Q942 2SA1235
Q946 CS81306 E
SW BAND SWITCH
SW BAND SWITCH
Q948 CS81306
L941 SW ANT
L941, TC943 SW TRACKING ADJ.
Q941 1SS133
Q949 2SC3052 F
AGC SWITCH
Q950 CS81306 E
AGC SWITCH
C956 100/10
Q941, 942 SW BAND SWITCH
TP1 VT
T10
T2-B
T2-C
REG
AM LO
T1-B
AM RF
AGC
R836 1k
D773 1SS133

SIGNAL:
← :FM
⇦ :MW

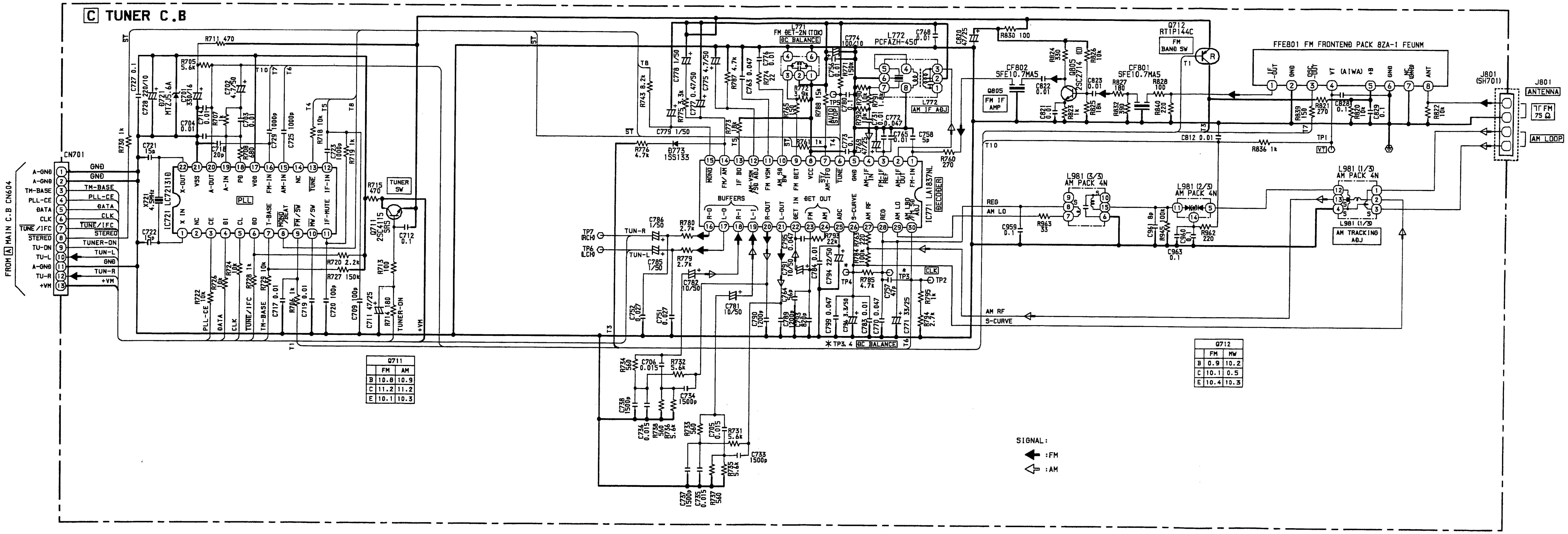

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
C TUNER C.B <HR>
FROM A MAIN C.B
CN604
13 11 9 7 5 3 1
CN701
TP7 (RCH)
GND
TP6 (LCH)
J940
MW LOOP
J801
ANTENNA
SW
FM 75Ω
IC721
IC701
C785
C786
C738
C787
C781
C752
C798
C702
C729
C703
R713
R728
R729
R709
R780
R779
R773
R776
R955
R953
R970
R958
R836
C947
C940
C959
C953
C810
C829

C TUNER C.B

<U, LH, HA>


FROM A MAIN C.B CN604
13 11 9 7 5 3 1
CN701
TP7 (RCH)
GND
TP6 (LCH)
Q711
Q712
J801 (SH701)
J801
ANTENNA
AM LOOP
FM 75Ω
IC721
IC771
FFE801
L771
L772
D773
R962
TP1 (VT)

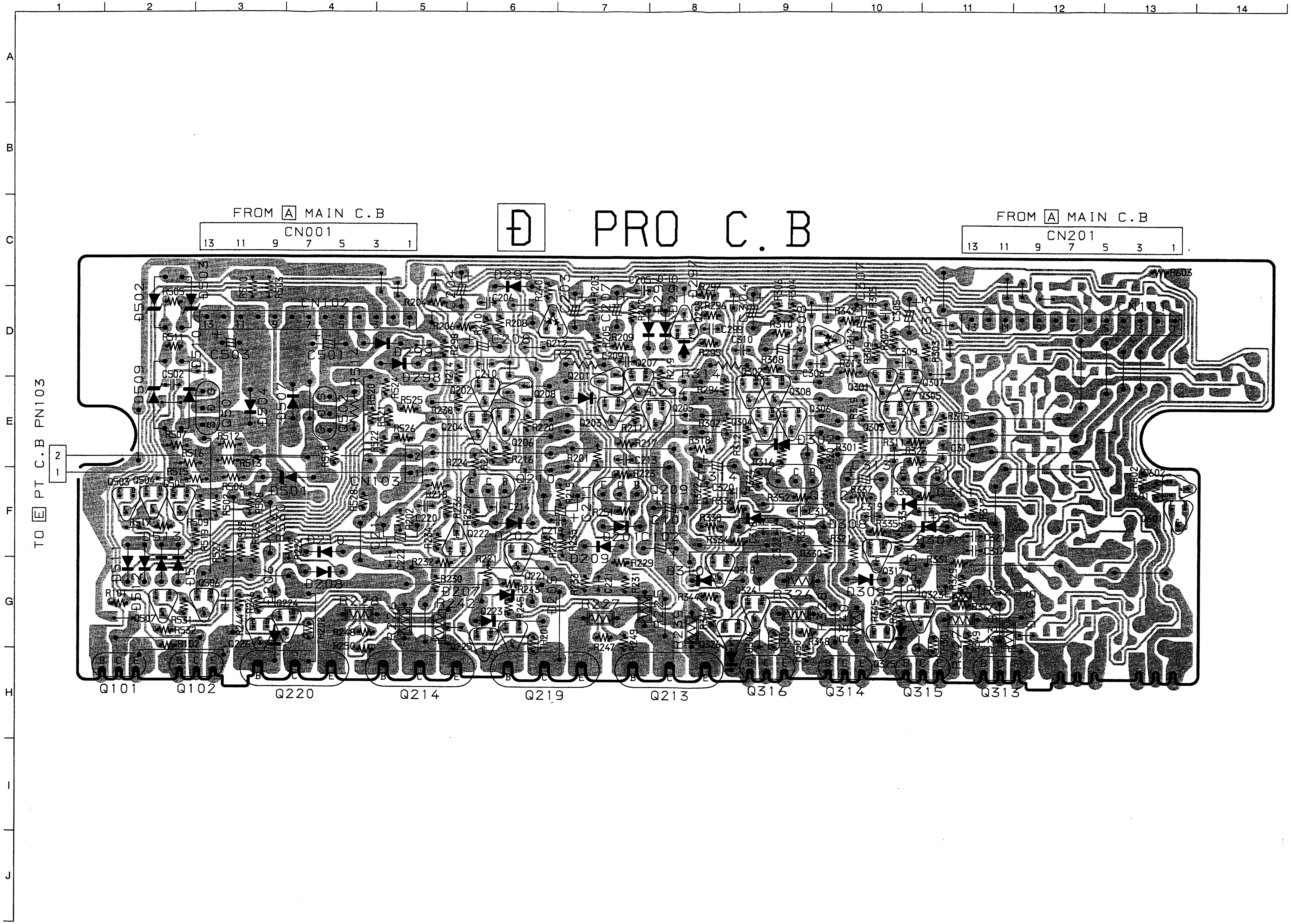
SCHEMATIC DIAGRAM – 5 (TUNER : U,LH,HA)


C TUNER C.B
FROM A MAIN C.B CN604
CN701
A-GND 1
A-GND 2
TM-BASE 3
PLL-CE 4
DATA 5
CLK 6
TUNE/IFC 7
STEREO 8
TU-ON 9
TU-L 10
A-GND 11
TU-R 12
+VM 13
GND
GND
TM-BASE
PLL-CE
DATA
CLK
TUNE/IFC
STEREO
TUNER-ON
TUN-L
GND
TUN-R
+VM
IC721 LC72131D
PLL
X721 4.5MHz
X-OUT
VSS
A-OUT
A-IN
PD
VDD
FM-IN
AM-IN
NC
TUNE
IF-IN
X IN
NC
CE
DI
CL
DO
T-BASE
MONO/BEAT
FM/SW
MW/SW
IF-MUTE
Q711 2SC4115
TUNER SW
R711 470
R705 5.6k
D711 MTZJ5.6A
R715 470
R720 2.2k
R727 150k
R713 100
R714 180
TUNER-ON
+VM
ST
T1
T3
T4
T5
T6
T7
T8
T10
TP7 (RCH)
TP6 (LCH)
TUN-R
TUN-L
R780 2.7k
R779 2.7k
C786 1/50
C785 1/50
C782 10/50
C781 10/50
R776 4.7k
D773 1SS133
C779 1/50
R743 8.2k
L771 FM DET-2N (TOKO)
DC BALANCE
C774 100/10
L772 PCFAZH-450
C768 0.01
AM IF ADJ
AUTO STOP
IC771 LA1837NL
DECODER
BUFFERS
DET OUT
MONO
FM/AM
IF DO
AM-VSM/SD ADJ
FM VSM
AM SD
IN
FM DET
VCC
ST/AM-IFO
TUNE
GND
AM IF IN
FM IF REF
FM-IN
R-O
L-O
R-I
L-I
R-OUT
L-OUT
DET IN
FM
AM
ADC
S-CURVE
AM RF
REG
AM LO
AM SD ADJ
R760 270
TP2
TP3
TP4
TP5
CLK
*TP3, 4 DC BALANCE
R734 560
C706 0.015
R732 5.6k
C738 1500p
C734 1500p
C736 0.015
R738 560
R736 5.6k
R733 560
C705 0.015
R731 5.6k
C733 1500p
C737 1500p
C735 0.015
R737 560
R735 5.6k
R830 100
Q712 RT1P144C
FM BAND SW
CF802 SFE10.7MA5
CF801 SFE10.7MA5
Q805 FM IF AMP
Q805 2SC2714 (O)
R824 330
R826 10k
R827 180
R828 100
R832 390
R840 220
C812 0.01
R836 1k
TP1
VT
FFE801 FM FRONTEND PACK 8ZA-1 FEUNM
IF OUT
GND
OSC OUT
VT
(AIWA) +B
GND
NC GND
ANT
R839 150
R821 270
C828 0.1
R822 10k
J801 (SH701)
ANTENNA
FM 75 Ω
AM LOOP
REG
AM LO
AM RF
S-CURVE
L981 (3/3) AM PACK 4N
L981 (2/3) AM PACK 4N
L981 (1/3) AM PACK 4N
AM TRACKING ADJ
R943 33
C959 0.1
C963 0.1
R962 220
SIGNAL:
:FM
:AM

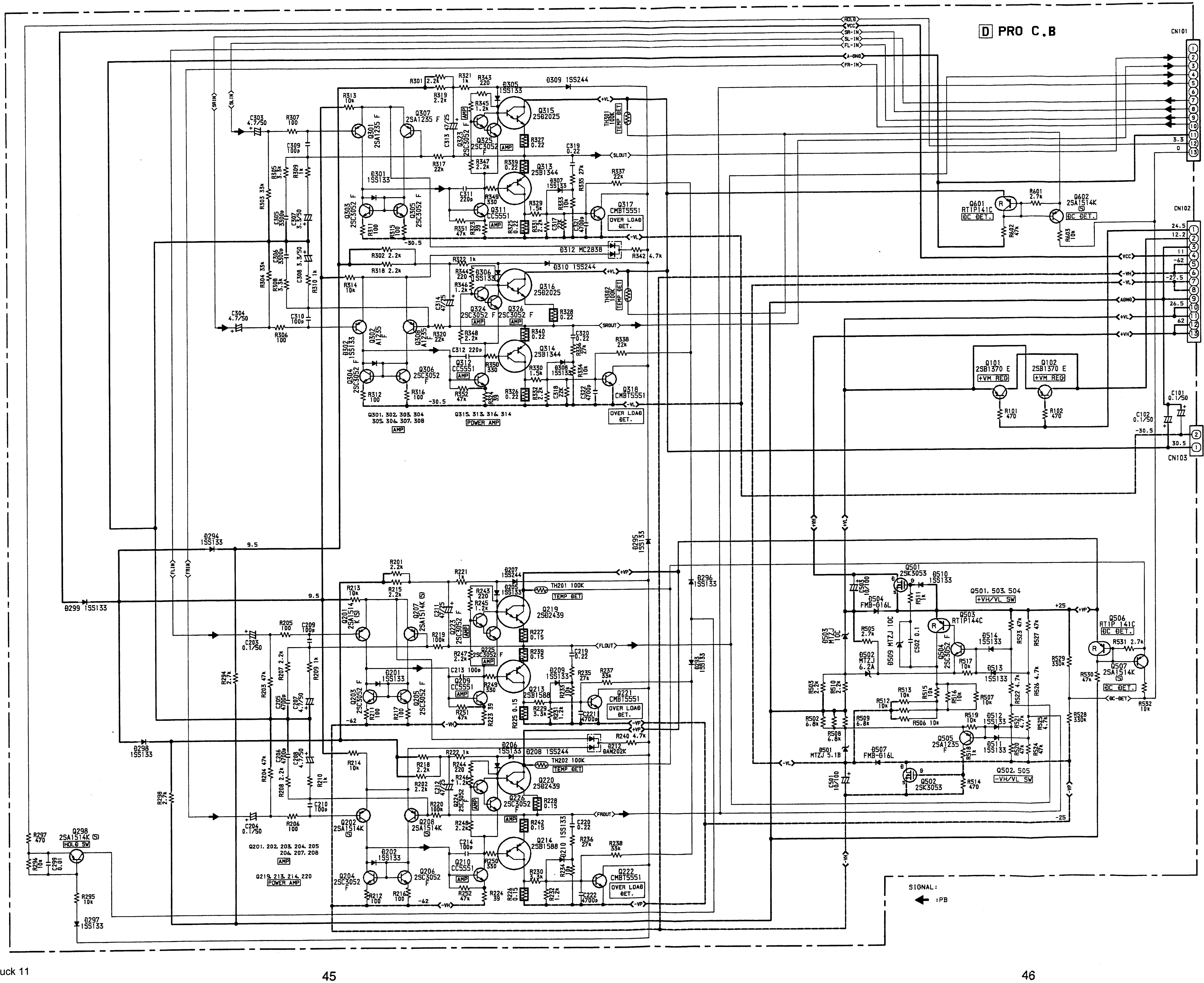
Q711		
	FM	AM
B	10.8	10.9
C	11.2	11.2
E	10.1	10.3

Q712		
	FM	MW
B	0.9	10.2
C	10.1	0.5
E	10.4	10.3

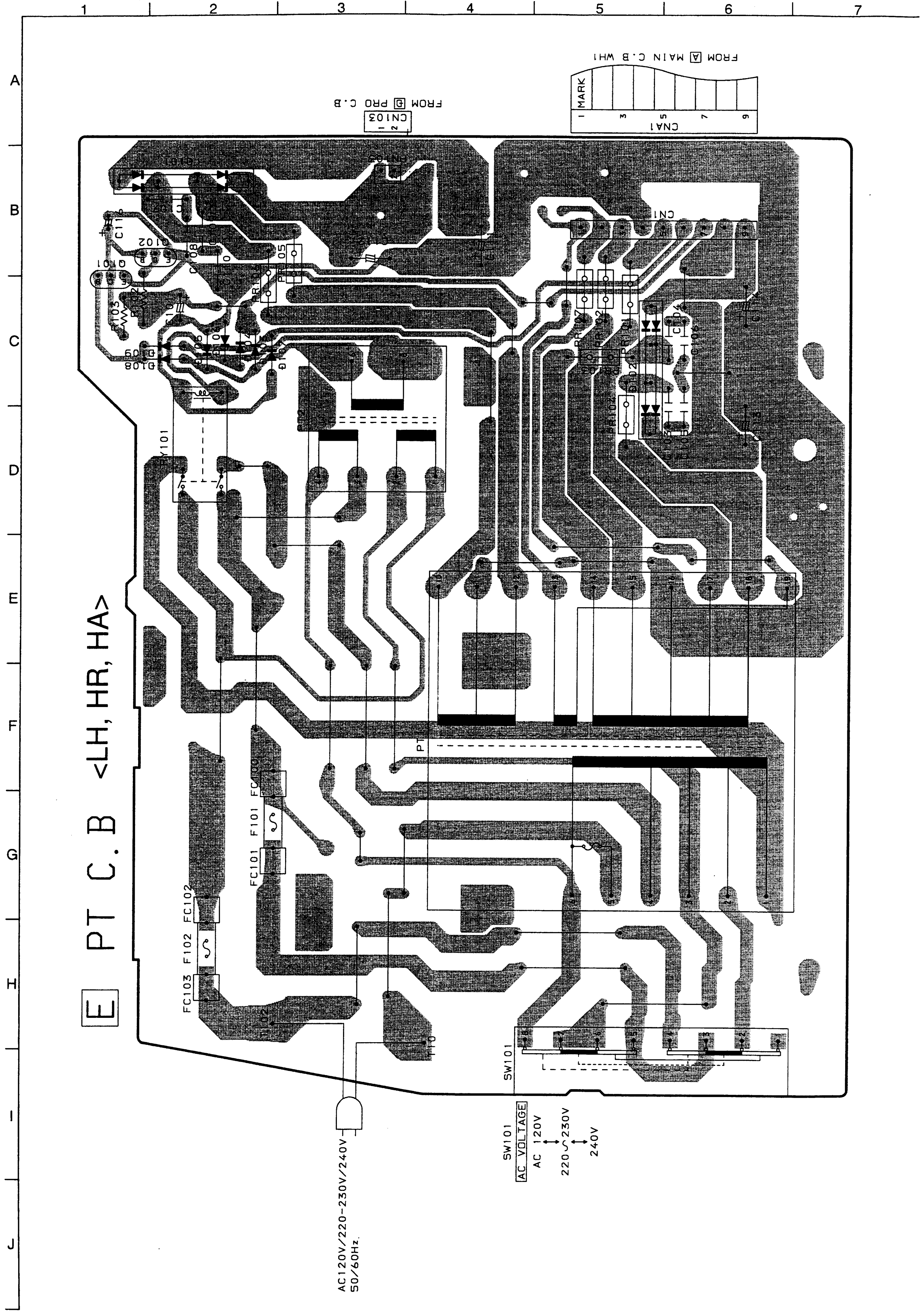
WIRING – 5 (PRO)


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
FROM A MAIN C.B
CN001
13 11 9 7 5 3 1
D PRO C.B
FROM A MAIN C.B
CN201
13 11 9 7 5 3 1
TO E PT C.B PN103
2
1
CN102
CN103
CN101
Q101
Q102
Q220
Q214
Q219
Q213
Q316
Q314
Q315
Q313

SCHEMATIC DIAGRAM – 6 (PRO)

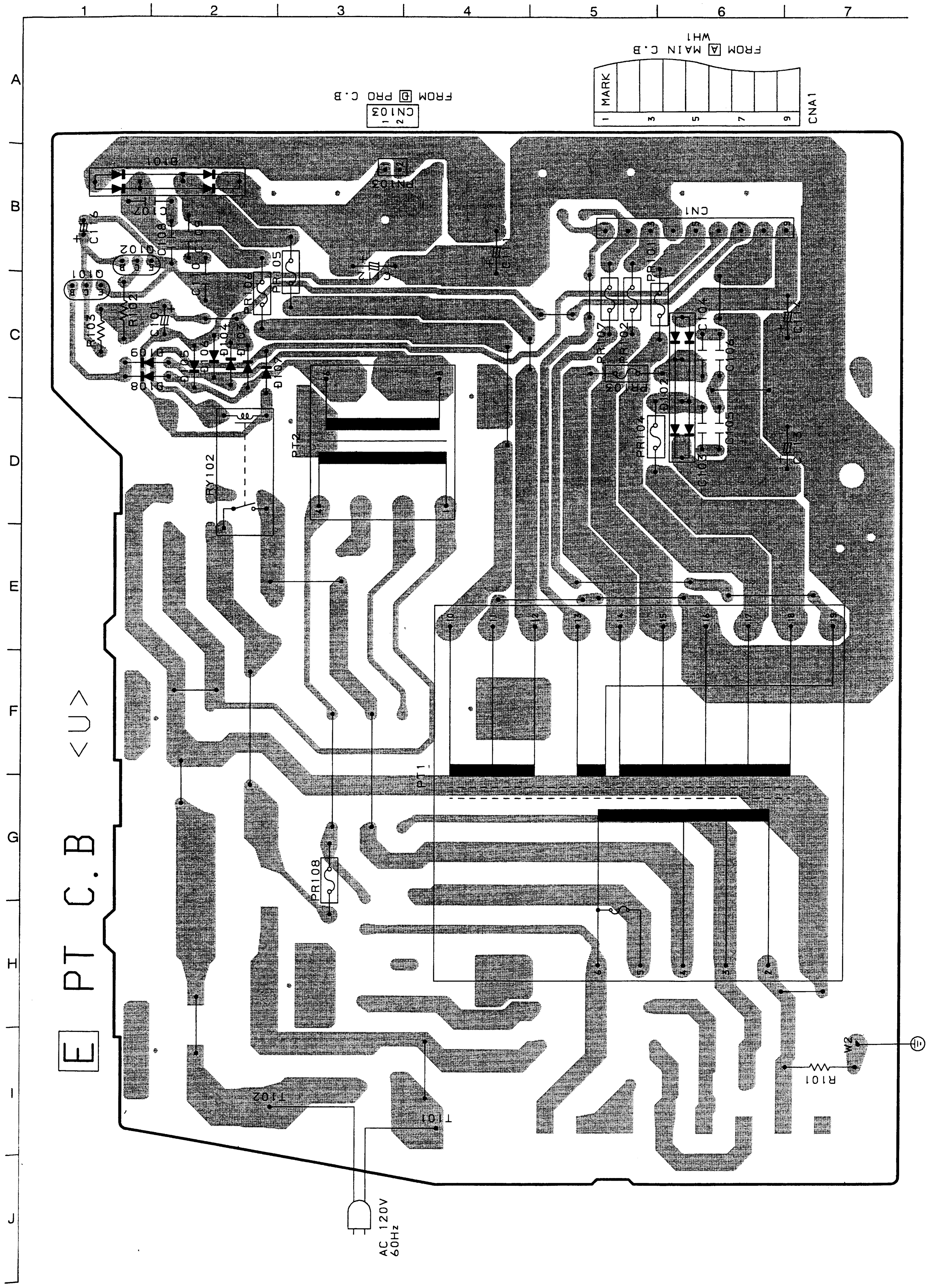

D PRO C.B
CN101
C-OUT (NC)
SL-OUT
SR-OUT
FL-OUT
FR-OUT
C-IN
SL-IN
SR-IN
FL-IN
FR-IN
A-GND
HOLD
DC-DET
FROM A MAIN C.B (AMP SECTION) CN201
CN102
VMCONT
+VM
A-GND
VCC
-VH
-VH
-VL
-VL
A-GND
+VL
+VL
+VH
+VH
FROM A MAIN C.B (AMP SECTION) CN001
CN103
-VS
+VS
TO E PT C.B PN103
Q601 RT1P141C DC DET.
Q602 2SA1514K (S) DC DET.
R601 2.7k
R602 47k
R603 10k
Q101 2SB1370 E +VM REG
Q102 2SB1370 E +VM REG
R101 470
R102 470
C101 0.1/50
C102 0.1/50
Q301 2SA1235 F
Q302 A1235 F
Q303 2SC3052 F
Q304 2SC3052 F
Q305 2SC3052 F
Q306 2SC3052 F
Q307 2SA1235 F
Q308 A1235 F
Q311 CC5551
Q312 CC5551
Q313 2SB1344
Q314 2SB1344
Q315 2SD2025
Q316 2SD2025
Q317 CMBT5551 OVER LOAD DET.
Q318 CMBT5551 OVER LOAD DET.
Q323 2SC3052 F
Q324 2SC3052 F
Q325 2SC3052
Q326 2SC3052 F
D301 1SS133
D305 1SS133
D306 1SS133
D307 1SS133
D308 1SS133
D309 1SS244
D310 1SS244
D312 MC2838
TH301 100K TEMP DET
TH302 100K TEMP DET
Q301, 302, 303, 304, 305, 306, 307, 308 AMP
Q315, 313, 316, 314 POWER AMP
SLOUT
SROUT
SR-IN
SL-IN
Q201 2SA1514K (S)
Q202 2SA1514K (S)
Q203 2SC3052 F
Q204 2SC3052 F
Q205 2SC3052 F
Q206 2SC3052 F
Q207 2SA1514K (S)
Q208 2SA1514K (S)
Q209 CC5551
Q210 CC5551
Q213 2SB1588
Q214 2SB1588
Q219 2SD2439
Q220 2SD2439
Q221 CMBT5551 OVER LOAD DET.
Q222 CMBT5551 OVER LOAD DET.
Q223 2SC3052 F
Q225 2SC3052 F
Q226 2SC3052
D201 1SS133
D202 1SS133
D205 1SS133
D206 1SS133
D207 1SS244
D208 1SS244
D209 1SS133
D210 1SS133
D212 DAN202K
TH201 100K TEMP DET
TH202 100K TEMP DET
Q201, 202, 203, 204, 205, 206, 207, 208 AMP
Q219, 213, 214, 220 POWER AMP
FLOUT
FROUT
FL-IN
FR-IN
D294 1SS133
D295 1SS133
D296 1SS133
D297 1SS133
D298 1SS133
D299 1SS133
Q298 2SA1514K (S) HOLD SW
R297 470
R296 10k
R295 10k
C299 0.01
Q501 2SK3053
Q502 2SK3053
Q503 RT1P144C
Q504 2SC3052 F
Q505 2SA1235 F
Q506 RT1P141C DC DET.
Q507 2SA1514K (S) DC DET.
Q501, 503, 504 +VH/VL SW
Q502, 505 -VH/VL SW
D501 MTZJ 5.1B
D502 MTZJ 6.2A
D503 MTZJ 10C
D504 FMB-G16L
D507 FMB-G16L
D509 MTZJ 10C
D510 1SS133
D511 1SS133
D512 1SS133
D513 1SS133
D514 1SS133
C501 10/100
C503 10/100
C502 0.1
SIGNAL:
:PB

WIRING – 6 (PT : LH,HR,HA)



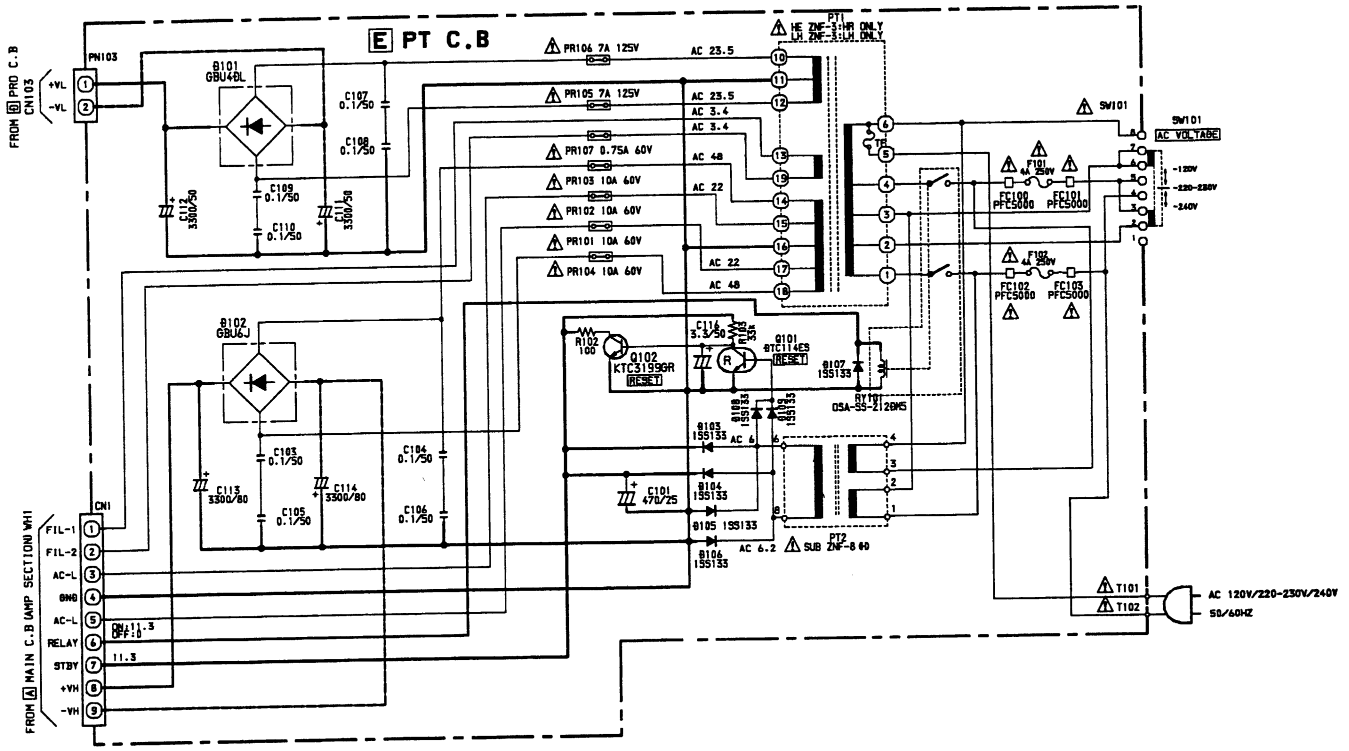
1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
FROM D PRO C.B
CN103
FROM A MAIN C.B WH1
CNA1
MARK
CN1
E PT C.B <LH, HR, HA>
RY101
F101
FC101
F102
FC102
FC103
SW101
SW101
AC VOLTAGE
AC 120V
220～230V
240V
AC120V/220–230V/240V
50/60Hz

WIRING – 7 (PT : U)

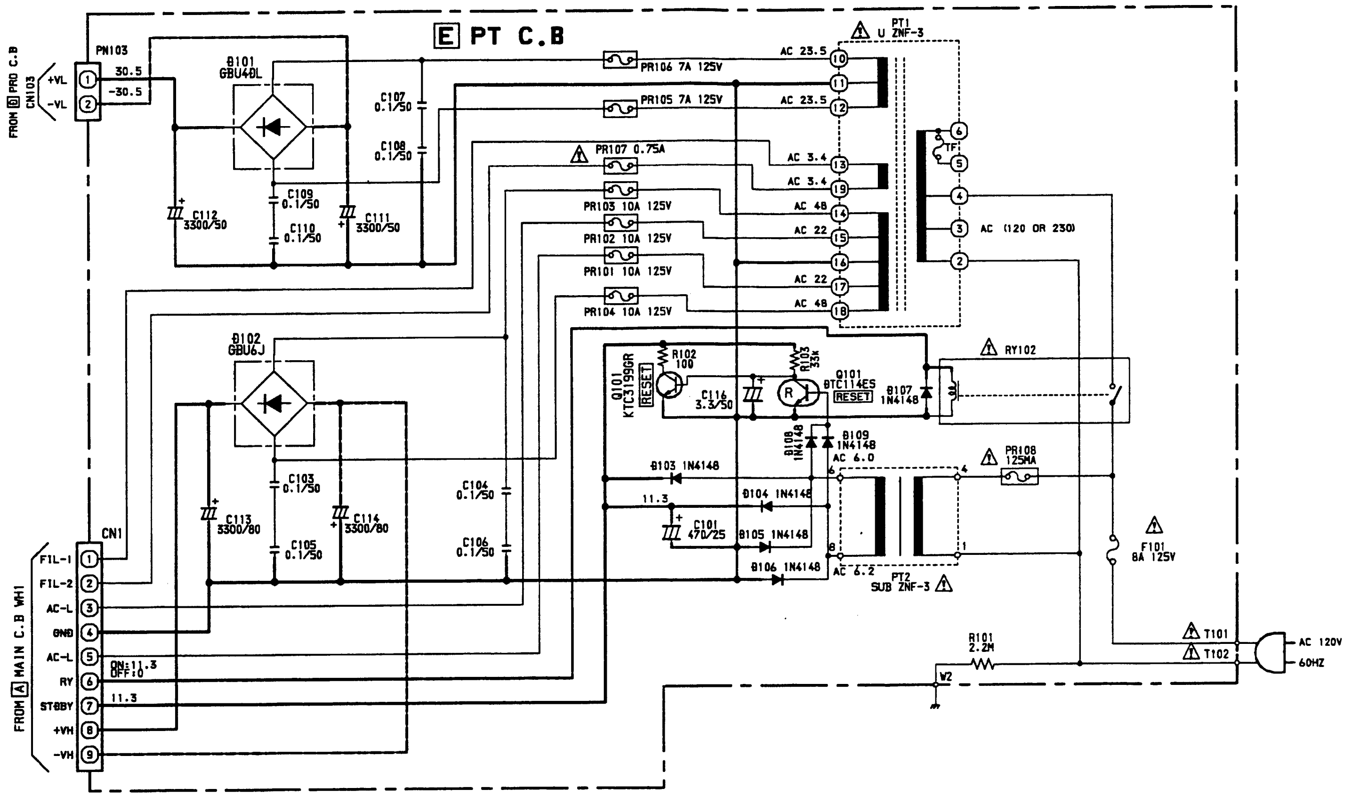


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
FROM D PRO C.B
CN103
FROM A MAIN C.B WH1
CNA1
MARK
CN1
E PT C.B <U>
RY102
PR108
T101
T102
R101
W2
AC 120V
60Hz

SCHEMATIC DIAGRAM – 7 (PT : LH,HR,HA)

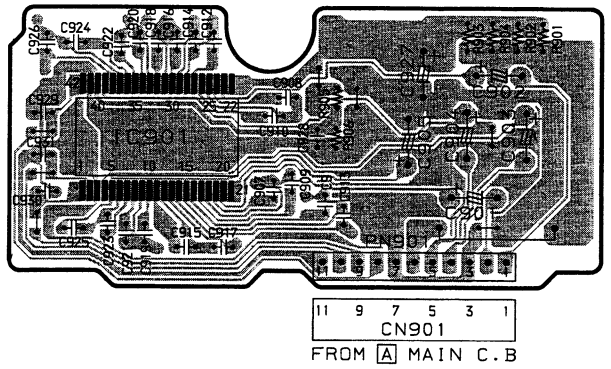

E PT C.B
FROM D PRO C.B CN103
PN103
+VL
-VL
B101 GBU4DL
C107 0.1/50
C108 0.1/50
C109 0.1/50
C110 0.1/50
C112 3300/50
C111 3300/50
PR106 7A 125V
PR105 7A 125V
PR107 0.75A 60V
PR103 10A 60V
PR102 10A 60V
PR101 10A 60V
PR104 10A 60V
AC 23.5
AC 3.4
AC 48
AC 22
PT1
HE ZNF-3:HR ONLY
LH ZNF-3:LH ONLY
TF
SW101
AC VOLTAGE
~120V
~220-230V
~240V
F101 4A 250V
FC100 PFC5000
FC101 PFC5000
F102 4A 250V
FC102 PFC5000
FC103 PFC5000
B102 GBU6J
C103 0.1/50
C105 0.1/50
C104 0.1/50
C106 0.1/50
C113 3300/80
C114 3300/80
R102 100
Q102 KTC3199GR
RESET
C116 3.3/50
R103 33k
Q101 BTC114ES
RESET
B107 1SS133
RY101 OSA-SS-212DM5
B108 1SS133
B109 1SS133
B103 1SS133
AC 6
C101 470/25
B104 1SS133
B105 1SS133
B106 1SS133
AC 6.2
PT2 SUB ZNF-8 HD
T101
T102
AC 120V/220-230V/240V
50/60HZ
CN1
FROM A MAIN C.B (AMP SECTION) WH1
FIL-1
FIL-2
AC-L
GND
AC-L
RELAY
STBY
+VH
-VH
ON:11.3
OFF:0
11.3

SCHEMATIC DIAGRAM – 8 (PT : U)


E PT C.B
FROM D PRO C.B CN103
PN103
+VL
-VL
30.5
-30.5
B101 GBU4DL
C107 0.1/50
C108 0.1/50
C109 0.1/50
C110 0.1/50
C112 3300/50
C111 3300/50
PR106 7A 125V
PR105 7A 125V
PR107 0.75A
PR103 10A 125V
PR102 10A 125V
PR101 10A 125V
PR104 10A 125V
AC 23.5
AC 3.4
AC 48
AC 22
PT1 U ZNF-3
TF
AC (120 OR 230)
B102 GBU6J
C103 0.1/50
C105 0.1/50
C104 0.1/50
C106 0.1/50
C113 3300/80
C114 3300/80
Q101 KTC3199GR
RESET
R102 100
C116 3.3/50
R103 33k
Q101 BTC114ES
RESET
B107 1N4148
RY102
B108 1N4148
B109 1N4148
AC 6.0
B103 1N4148
B104 1N4148
11.3
C101 470/25
B105 1N4148
B106 1N4148
AC 6.2
PT2 SUB ZNF-3
PR108 125MA
F101 8A 125V
R101 2.2M
W2
T101
T102
AC 120V
60HZ
CN1
FROM A MAIN C.B WH1
FIL-1
FIL-2
AC-L
GND
AC-L
RY
STBY
+VH
-VH
ON:11.3
OFF:0
11.3

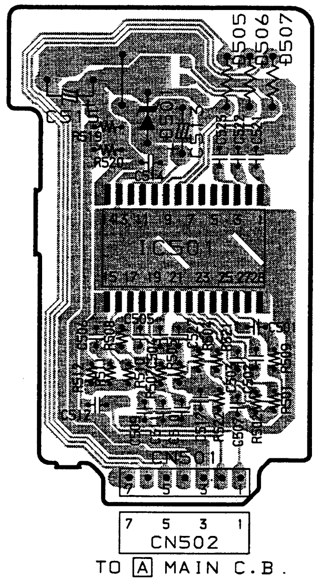
WIRING – 8 (GEQ / KEY CON / KEY / JOG)

H GEQ C.B



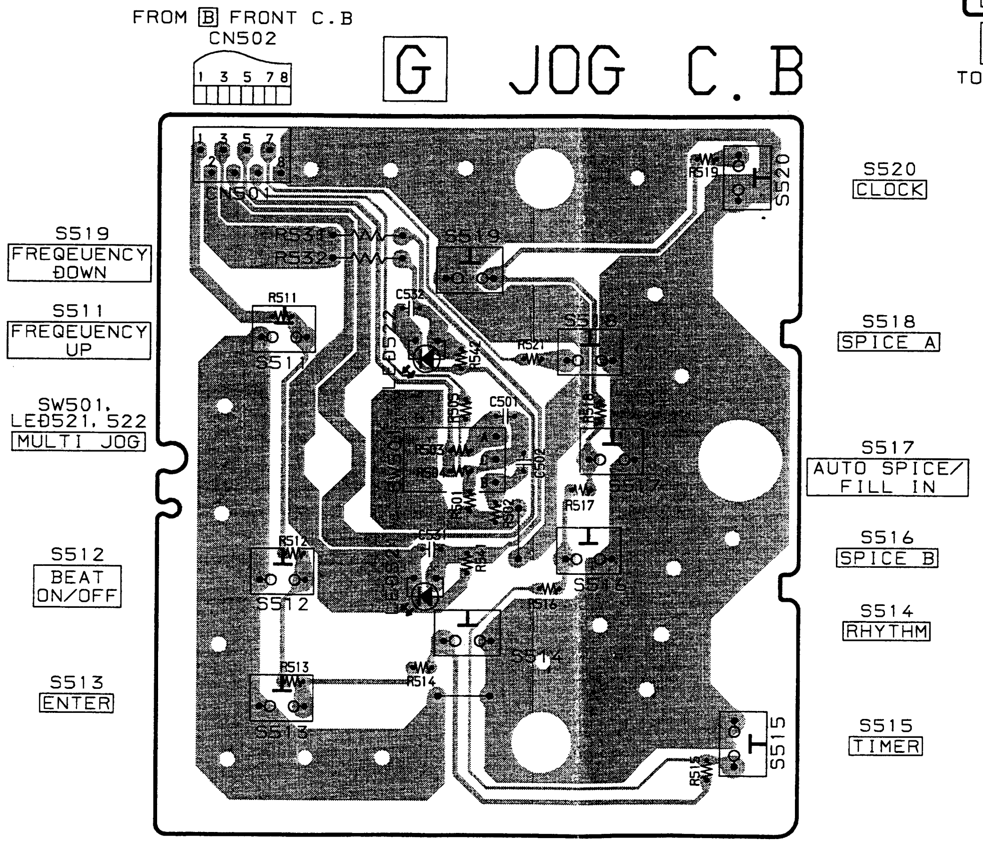
C924
IC901
11 9 7 5 3 1
CN901
FROM A MAIN C.B

I KEY CON C.B <HR>



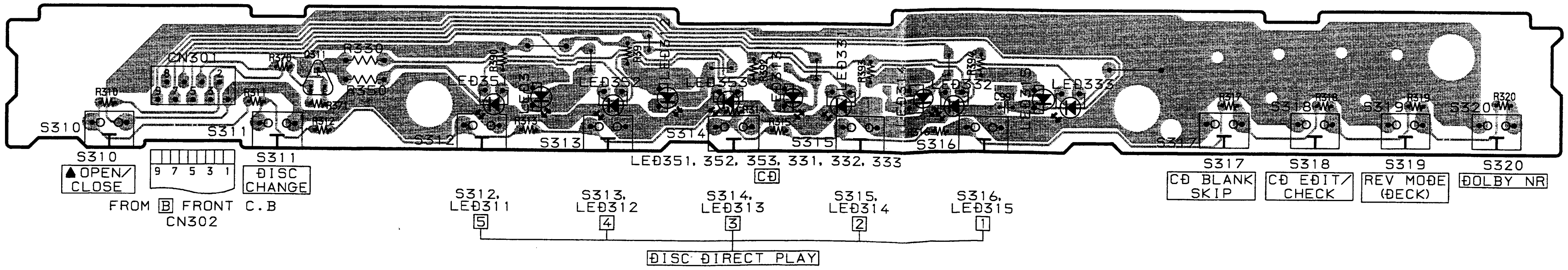
D505
D506
D507
IC501
7 5 3 1
CN502
TO A MAIN C.B.

G JOG C.B



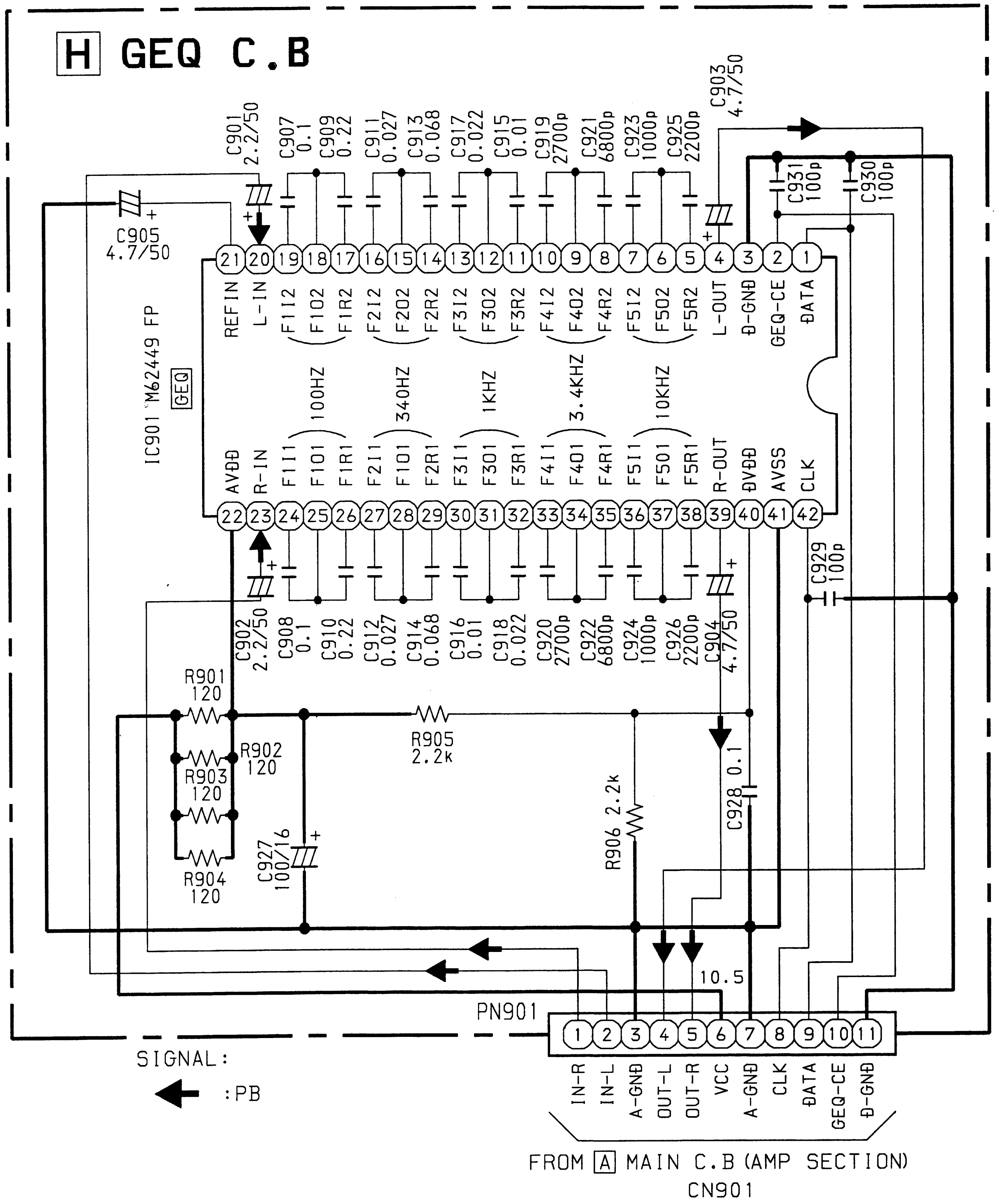
FROM B FRONT C.B
CN502
1 3 5 7 8
CN501
S520
CLOCK
S519
FREQEUENCY DOWN
S511
FREQEUENCY UP
SW501, LED521, 522
MULTI JOG
S512
BEAT ON/OFF
S513
ENTER
S518
SPICE A
S517
AUTO SPICE/ FILL IN
S516
SPICE B
S514
RHYTHM
S515
TIMER
R511
R512
R513
R514
R517
R519
R521
C501
C532

F KEY C.B

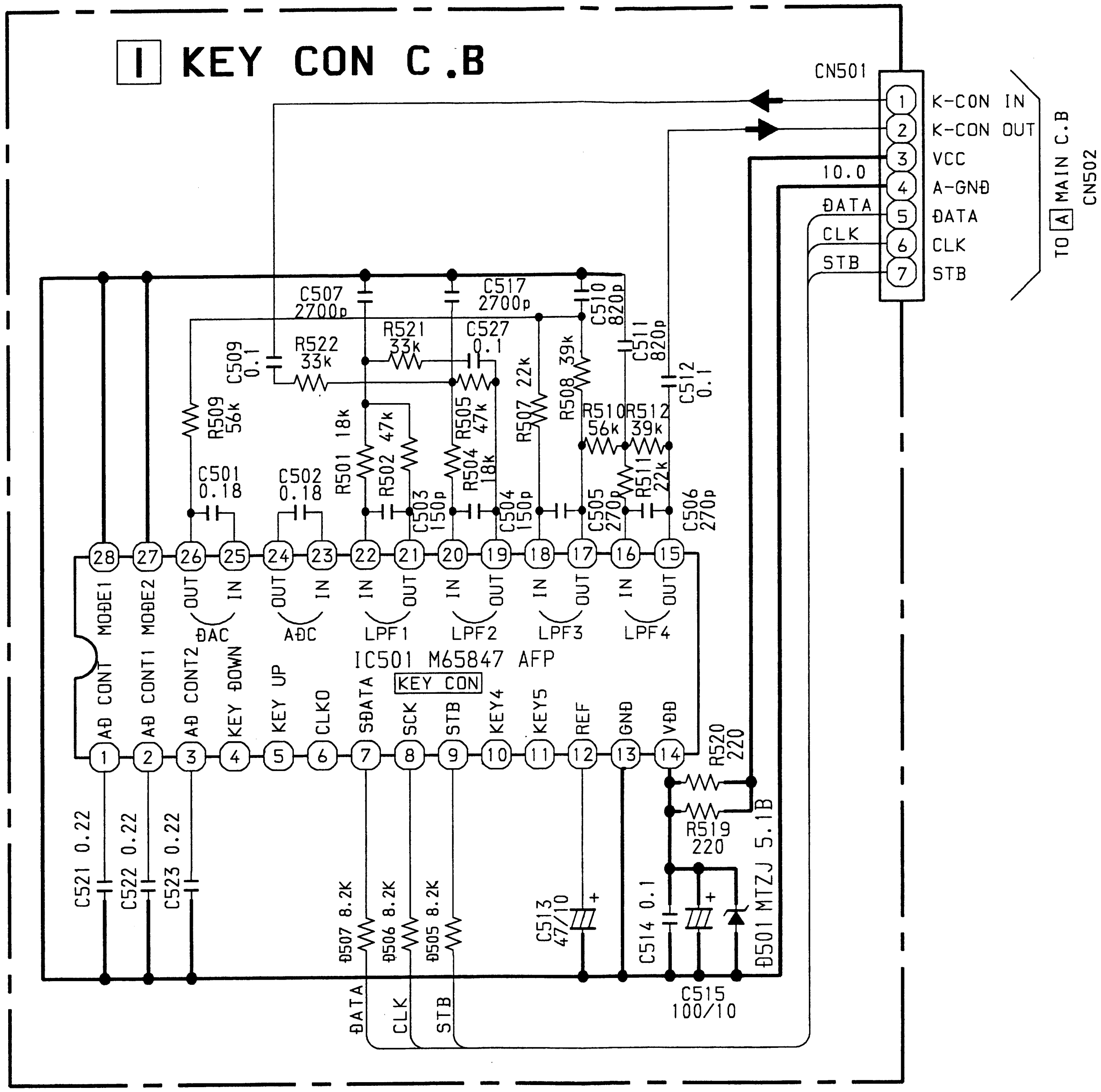


CN301
R310
R330
R350
S310
▲OPEN/ CLOSE
9 7 5 3 1
FROM B FRONT C.B
CN302
S311
DISC CHANGE
LED351
LED352
LED353
LED331
LED332
LED333
S312, LED311
5
S313, LED312
4
S314, LED313
3
S315, LED314
2
S316, LED315
1
DISC DIRECT PLAY
LED351, 352, 353, 331, 332, 333
CD
R317
R318
R319
R320
S317
CD BLANK SKIP
S318
CD EDIT/ CHECK
S319
REV MODE (DECK)
S320
DOLBY NR

SCHEMATIC DIAGRAM – 9 (GEQ)

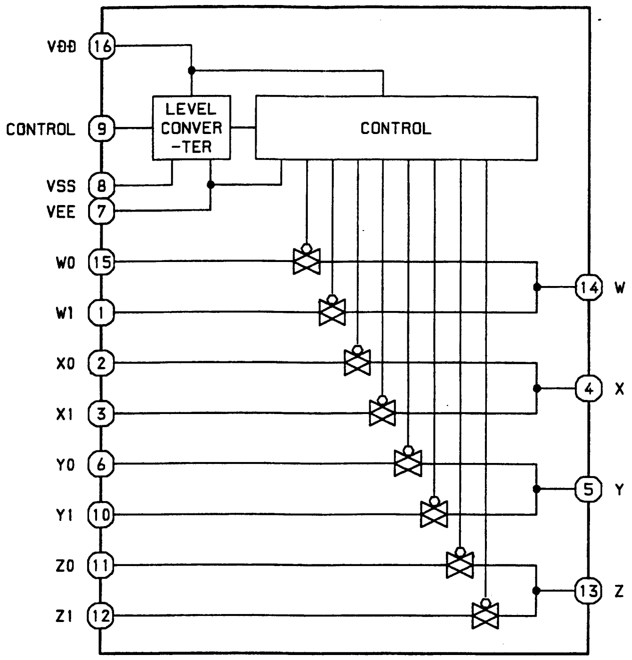

H GEQ C.B
IC901 M62449 FP
GEQ
REFIN
L-IN
F112 F102 F1R2
F212 F202 F2R2
F312 F302 F3R2
F412 F402 F4R2
F512 F502 F5R2
L-OUT
Ð-GNÐ
GEQ-CE
ÐATA
AVÐÐ
R-IN
F111 F101 F1R1
F211 F101 F2R1
F311 F301 F3R1
F411 F401 F4R1
F511 F501 F5R1
R-OUT
ÐVÐÐ
AVSS
CLK
100HZ
340HZ
1KHZ
3.4KHZ
10KHZ
C901 2.2/50
C902 2.2/50
C903 4.7/50
C904 4.7/50
C905 4.7/50
C907 0.1
C908 0.1
C909 0.22
C910 0.22
C911 0.027
C912 0.027
C913 0.068
C914 0.068
C915 0.01
C916 0.01
C917 0.022
C918 0.022
C919 2700p
C920 2700p
C921 6800p
C922 6800p
C923 1000p
C924 1000p
C925 2200p
C926 2200p
C927 100/16
C928 0.1
C929 100p
C930 100p
C931 100p
R901 120
R902 120
R903 120
R904 120
R905 2.2k
R906 2.2k
10.5
PN901
IN-R
IN-L
A-GNÐ
OUT-L
OUT-R
VCC
A-GNÐ
CLK
ÐATA
GEQ-CE
Ð-GNÐ
FROM A MAIN C.B (AMP SECTION)
CN901
SIGNAL:
:PB

SCHEMATIC DIAGRAM – 10 (KEY CON : HR)


I KEY CON C.B
CN501
K-CON IN
K-CON OUT
VCC
A-GNÐ
ÐATA
CLK
STB
10.0
TO A MAIN C.B CN502
IC501 M65847 AFP
KEY CON
MODE1
MODE2
AÐ CONT
AÐ CONT1
AÐ CONT2
KEY ÐOWN
KEY UP
CLKO
SÐATA
SCK
STB
KEY4
KEY5
REF
GNÐ
VÐÐ
ÐAC
AÐC
LPF1
LPF2
LPF3
LPF4
C501 0.18
C502 0.18
C503 150p
C504 150p
C505 270p
C506 270p
C507 2700p
C509 0.1
C510 820p
C511 820p
C512 0.1
C513 47/10
C514 0.1
C515 100/10
C517 2700p
C521 0.22
C522 0.22
C523 0.22
C527 0.1
R501 18k
R502 47k
R504 18k
R505 47k
R507 22k
R508 39k
R509 56k
R510 56k
R511 22k
R512 39k
R519 220
R520 220
R521 33k
R522 33k
Ð505 8.2K
Ð506 8.2K
Ð507 8.2K
Ð501 MTZJ 5.1B
ÐATA
CLK
STB

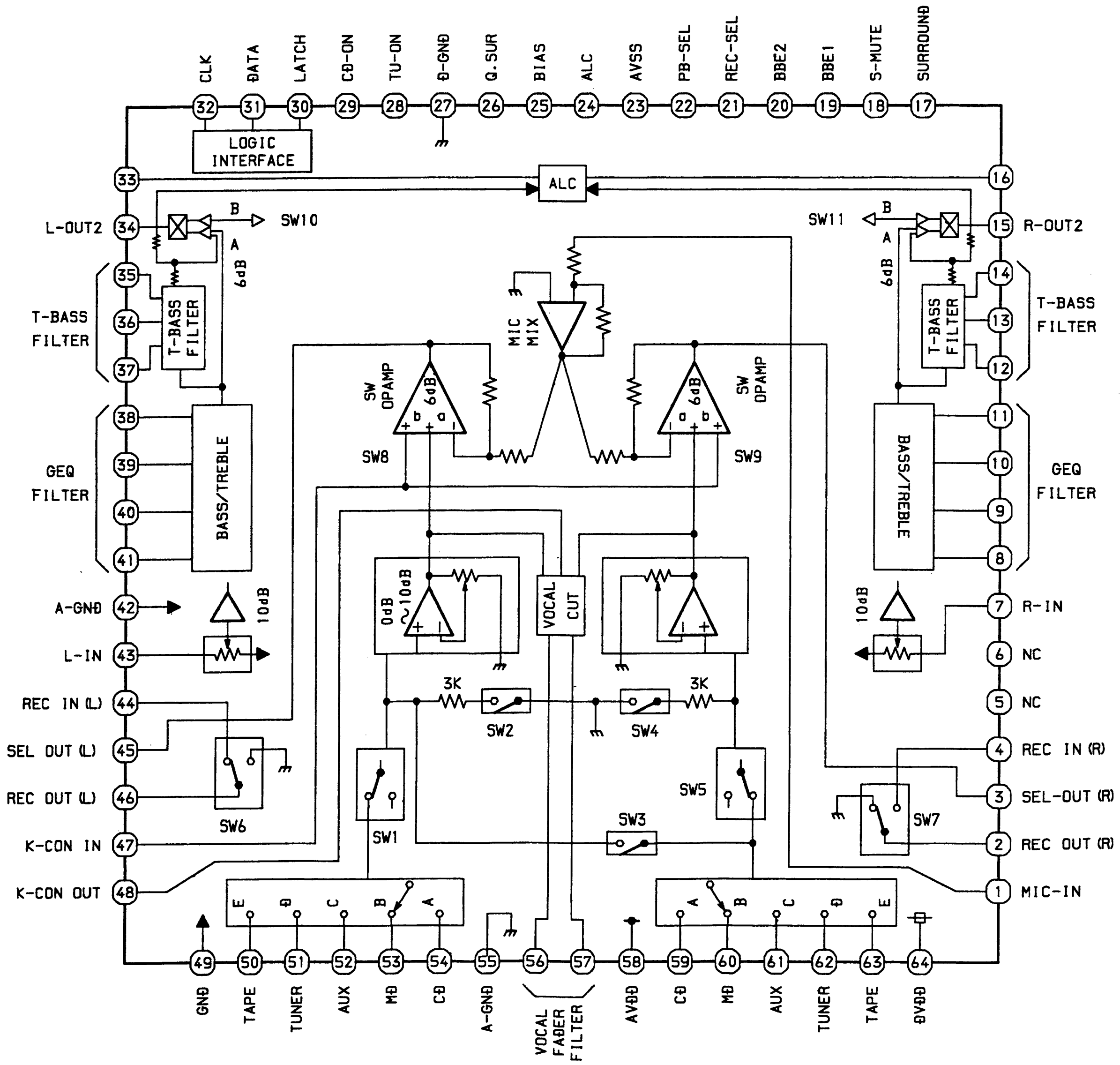
IC BLOCK DIAGRAM – 4

IC, BU4551BF



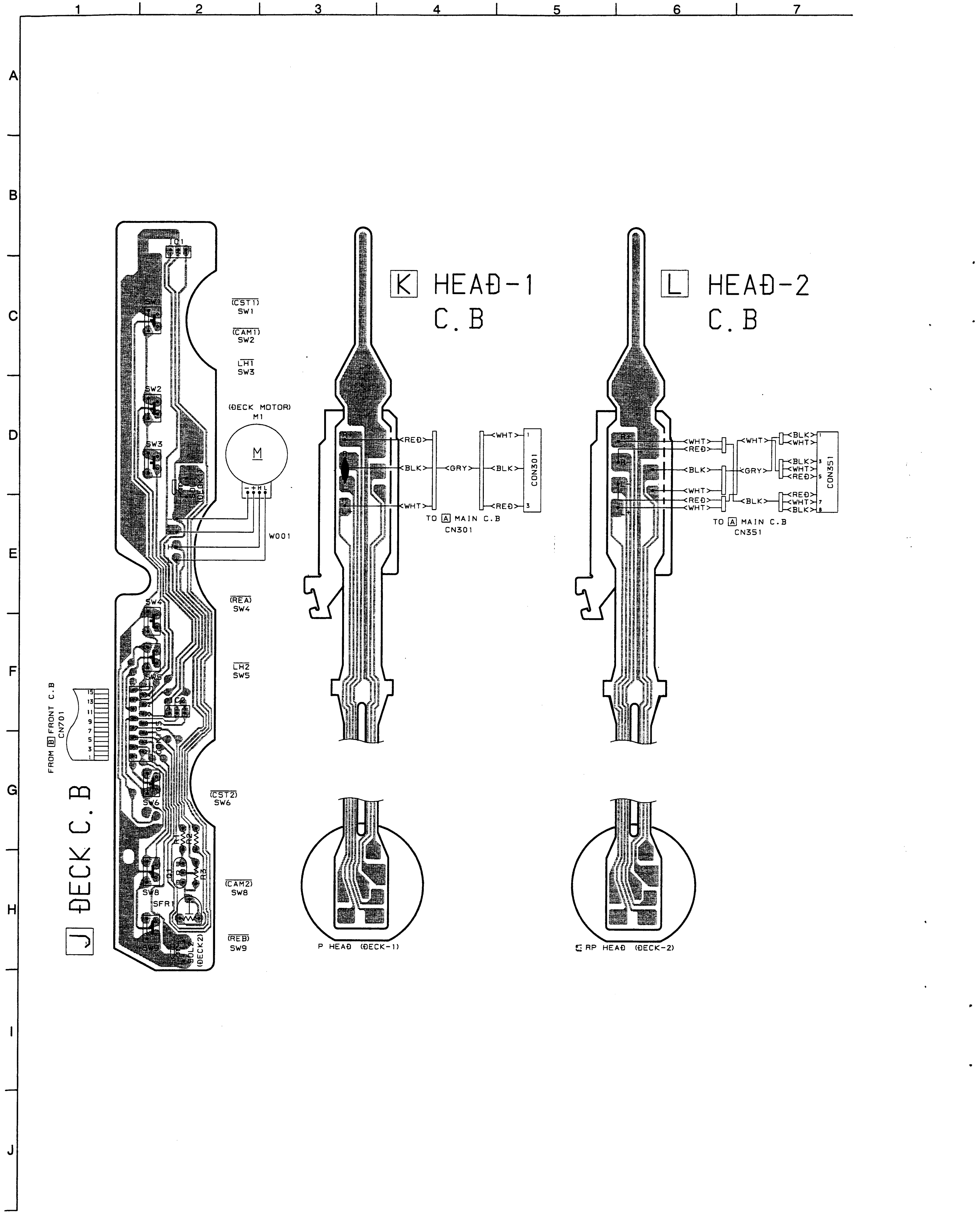
VDD 16
CONTROL 9
VSS 8
VEE 7
LEVEL CONVER -TER
CONTROL
W0 15
W1 1
X0 2
X1 3
Y0 6
Y1 10
Z0 11
Z1 12
14 W
4 X
5 Y
13 Z

IC, M62445AFP



CLK 32
DATA 31
LATCH 30
CD-ON 29
TU-ON 28
D-GND 27
Q.SUR 26
BIAS 25
ALC 24
AVSS 23
PB-SEL 22
REC-SEL 21
BBE2 20
BBE1 19
S-MUTE 18
SURROUND 17
LOGIC INTERFACE
ALC
33
16
L-OUT2 34
R-OUT2 15
SW10
SW11
B
A
6dB
T-BASS FILTER
35 36 37
14 13 12
T-BASS FILTER
MIC MIX
SW OPAMP
6dB
SW8
SW9
GEQ FILTER
38 39 40 41
11 10 9 8
GEQ FILTER
BASS/TREBLE
0dB ~10dB
VOCAL CUT
10dB
A-GND 42
L-IN 43
7 R-IN
6 NC
5 NC
REC IN (L) 44
SEL OUT (L) 45
REC OUT (L) 46
K-CON IN 47
K-CON OUT 48
4 REC IN (R)
3 SEL-OUT (R)
2 REC OUT (R)
1 MIC-IN
3K
SW2
SW4
SW1
SW3
SW5
SW6
SW7
E D C B A
A B C D E
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
GND
TAPE
TUNER
AUX
MD
CD
A-GND
VOCAL FADER FILTER
AVDD
CD
MD
AUX
TUNER
TAPE
DVDD

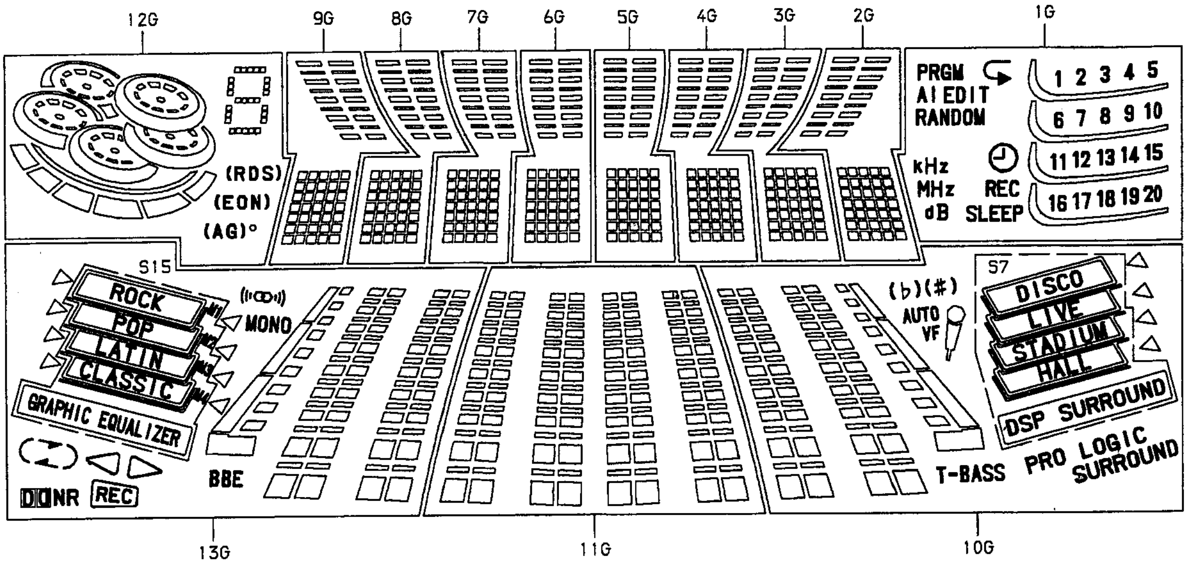
WIRING – 9 (DECK)

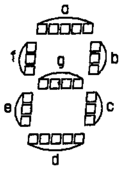


1 2 3 4 5 6 7
A B C D E F G H I J
J DECK C.B
FROM B FRONT C.B CN701
15 13 11 9 7 5 3 1
IC1
SW1 SW2 SW3 SW4 SW5 SW6 SW8 SW9
(CST1) SW1
(CAM1) SW2
LH1 SW3
(DECK MOTOR) M1
M
- + H L
W001
(REA) SW4
LH2 SW5
(CST2) SW6
(CAM2) SW8
(REB) SW9
SFR1
R1 R2 R3
Q1
SOL2 (DECK2)
K HEAD-1 C.B
<RED>
<BLK>
<WHT>
<GRY>
<WHT>
<BLK>
<RED>
CON301
1 3
TO A MAIN C.B CN301
P HEAD (DECK-1)
L HEAD-2 C.B
<WHT>
<RED>
<BLK>
<WHT>
<RED>
<WHT>
<WHT>
<GRY>
<BLK>
<BLK>
<WHT>
<BLK>
<WHT>
<RED>
<RED>
<WHT>
<BLK>
CON351
1 3 5 7 8
TO A MAIN C.B CN351
E RP HEAD (DECK-2)

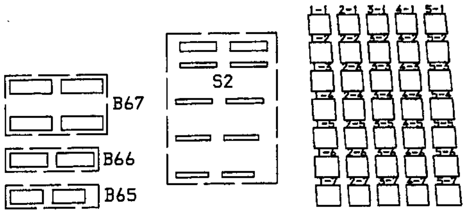
FL GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT

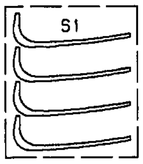

12G
9G
8G
7G
6G
5G
4G
3G
2G
1G
(RDS)
(EON)
(AG)°
PRGM
AI EDIT
RANDOM
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
kHz
MHz
dB
REC
SLEEP
S15
ROCK
POP
LATIN
CLASSIC
GRAPHIC EQUALIZER
MONO
DNR
REC
BBE
(♭)(#)
AUTO
VF
S7
DISCO
LIVE
STADIUM
HALL
DSP SURROUND
T-BASS
PRO LOGIC SURROUND
13G
11G
10G



[12G]

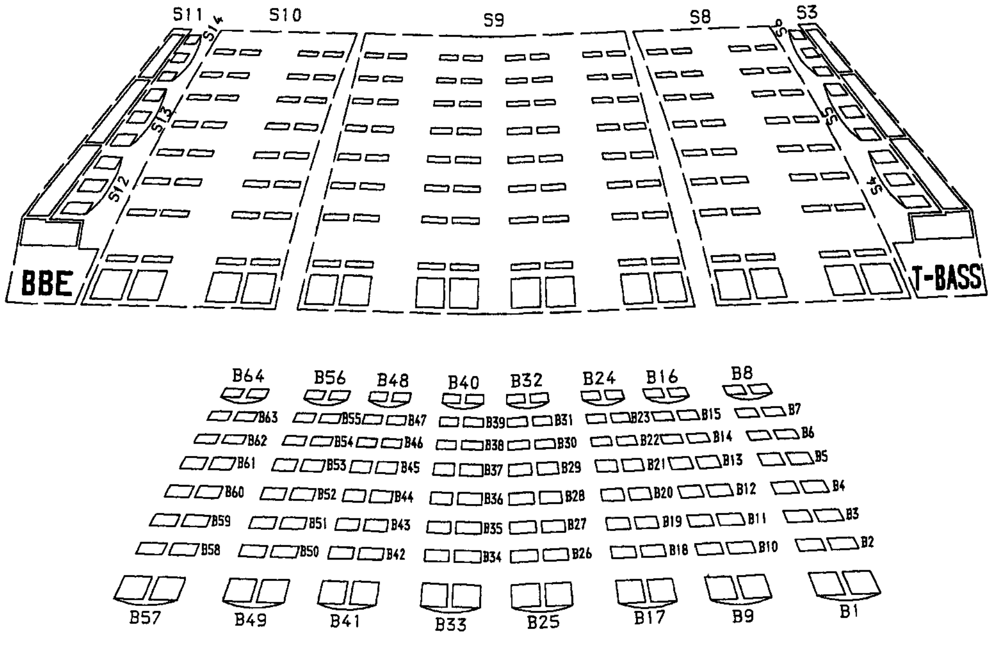

B67
B66
B65
S2
1-1
2-1
3-1
4-1
5-1

[9G~2G]

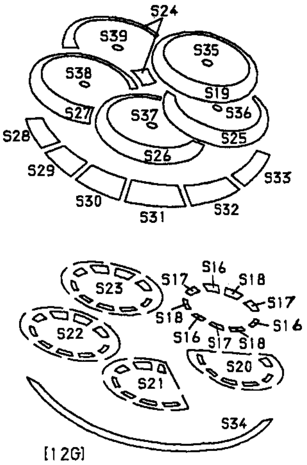


[1G]

SEGMENT DESIGNATION


S11
S14
S10
S9
S8
S3
S6
S13
S5
S12
S4
BBE
T-BASS
B64
B56
B48
B40
B32
B24
B16
B8
B63
B55
B47
B39
B31
B23
B15
B7
B62
B54
B46
B38
B30
B22
B14
B6
B61
B53
B45
B37
B29
B21
B13
B5
B60
B52
B44
B36
B28
B20
B12
B4
B59
B51
B43
B35
B27
B19
B11
B3
B58
B50
B42
B34
B26
B18
B10
B2
B57
B49
B41
B33
B25
B17
B9
B1

[13G, 11G, 10G]


S24
S39
S35
S38
S19
S36
S27
S37
S25
S28
S26
S29
S33
S30
S31
S32
S16
S23
S17
S18
S17
S16
S22
S18
S16
S17
S18
S21
S20
S34

[12G]

ANODE CONNECTION

	13G	12G	11G	10G	9G~2G	1G
P1	((·OO·))	o	–	♯	5-7	S1
P2	**MONO**	**(** **)** (AG)	–	**(** **)** (♯)	4-7	**PRGM**
P3	S14	**AG**	B32	♭ (b)	3-7	**AI**
P4	S13	**(** **)** (EON)	B31	**(** **)**	2-7	**EDIT**
P5	S12	**EON**	B30	**VF** 🎤	1-7	**RANDOM**
P6	S11	**(** **)** (RDS)	B29	**AUTO**	5-6	↻
P7	(M1) △	**RDS**	B28	S3	4-6	🕒
P8	(M2) △	S33	B27	S4	3-6	**REC**
P9	(M3) △	S32	B26	S5	2-6	**SLEEP**
P10	(M4) △	S31	B25	S6	1-6	**kHz**
P11	B64	S30	B48	B16	5-5	**MHz**
P12	B63	S29	B47	B15	4-5	**dB**
P13	B62	S28	B46	B14	3-5	**1**
P14	B61	S34	B45	B13	2-5	**2**
P15	B60	S25	B44	B12	1-5	**3**
P16	B59	S26	B43	B11	5-4	**4**
P17	B58	S20	B42	B10	4-4	**5**
P18	B57	S36	B41	B9	3-4	**6**
P19	S10	S21	S9	S8	2-4	**7**
P20	B56	S37	B40	B8	1-4	**8**
P21	B55	S27	B39	B7	5-3	**9**
P22	B54	S22	B38	B6	4-3	**10**
P23	B53	S38	B37	B5	3-3	**11**
P24	B52	S24	B36	B4	2-3	**12**
P25	B51	S23	B35	B3	1-3	**13**
P26	B50	S39	B34	B2	5-2	**14**
P27	B49	S19	B33	B1	4-2	**15**
P28	S15	S35	B24	–	3-2	**16**
P29	△ (ROCK)	S16	B23	–	2-2	**17**
P30	△ (POP)	S17	B22	S7	1-2	**18**
P31	△ (LATIN)	S18	B21	**PRO LOGIC** **SURROUND**	5-1	**19**
P32	△ (CLASSIC)	d	B20	(DISCO) △	4-1	**20**
P33	▷	e	B19	(LIVE) △	3-1	–
P34	◁	c	B18	(STADIUM) △	2-1	–
P35	**REC**	g	B17	(HALL) △	1-1	–
P36	)	f	–	–	B65	–
P37	⇄	b	–	–	B66	–
P38	(	a	–	–	B67	–
P39	**DDNR**	–	–	–	S2	–

IC DESCRIPTION

IC, LC876580W-5K75

Pin No.	Pin Name	I/O	Description
1	CLK	O	Common serial CLOCK output.
2	DATA	O	Common Serial DATA output.
3	STB	O	Common serial STROBE output.
4	CS-RYTHM	O	Rhythm IC chip select output.
5	GEQ-CE	O	GEQ IC chip enable output.
6	$\overline{\text{HP-MUTE}}$	I	Headphone plug-in detect input. (Output "L" at HOLD)
7	O-POWER	O	System power ON/$\overline{\text{OFF}}$ output. (Active "H")
8	PLL-CE	O	Tuner PLL IC chip enable output.
9	O-MUTE	O	System mute ON/$\overline{\text{OFF}}$ output.
10	I-TMBASE	I	Timebase clock (8Hz) input. (Output "L" at HOLD)
11	$\overline{\text{RESET}}$	I	Reset input.
12	VOL-JOG	I	Main volume JOG rotary encoder A/D input.
13	MULTI-JOG	I	MULTI JOG rotary encoder A/D input.
14	VSS1	–	Connected to GND.
15	CF 1	–	9.43MHz oscillator circuit.
16	CF2	–	
17	VDD1	–	Power supply.
18	$\overline{\text{HOLD}}$	I	Power supply voltage detect A/D input.
19 ~ 22	KEY 1 ~ 4	I	KEY 1 ~ 4 A/D input. (Output "L" at HOLD)
23	I-CDSW	I	CD mechanism SW A/D input. (Output "L" at HOLD)
24	I-DISH	I	CD turntable photo sensor A/D input. (Output "L" at HOLD)
25	I-MIC	I	Auto-VF MIC level special A/D input. (Output "L" at HOLD)
26	I-SPEANA	I	SPEANA level A/D input. (Output "L" at HOLD)
27	$\overline{\text{MS}}$/I-TU-SIG	I	Deck MS SENS / Tuner tuning signal level A/D input. (Output "L" at HOLD)
28	I-SENS/I-RDSCLK	I	CD IC SENS / Tuner RDS IC CLK (INT2) input. (Output "L" at HOLD&INI)
29	$\overline{\text{I-RMC}}$	I	Remote control signal input. Active: "L". (Output "L" at HOLD)
30 ~ 42	G13 ~ G1	O	FL grid G13 ~ G1 output.
43 ~45, 47	P39 ~ P36	O	FL segment P39 ~ P36 output.
46	VDD3	–	Power supply.
48	P35/SPEANA A	O	FL segment P35 output / SPEANA band select output (A) .
49	P34/SPEANA B	O	FL segment P34 output / SPEANA band select output (B) .
50	P33/SPEANA C	O	FL segment P33 output / SPEANA band select output (C).
51	VP	–	Power supply for FL.
52 ~ 57	P32 ~ P27	–	FL segment P32 ~ P27 output.
58	P26/$\overline{\text{AC DEMO}}$	I/O	FL segment P26 output / $\overline{\text{DEMO}}$ at AC-IN diode input.(No store DEMO mode.)
59	P25/DOLBY-SUR	I/O	FL segment P25 output / DOLBY-PRO select diode input.
60	P24/AC 3	I/O	FL segment P24 output / AC 3 (5CH IN) select input.
61	P23/K-CON	I/O	FL segment P23 output / Key control select diode input.
62	P22/RDS	I/O	FL segment P22 outpout / RDS select diode input.
63	P21/FM1	I/O	FL segment P21 output / FM1 select diode input.
64	P20/SW	I/O	FL segment P20 output / SW select diode input.
65	P19/LW	I/O	FL segment P19 output / LW select diode input.

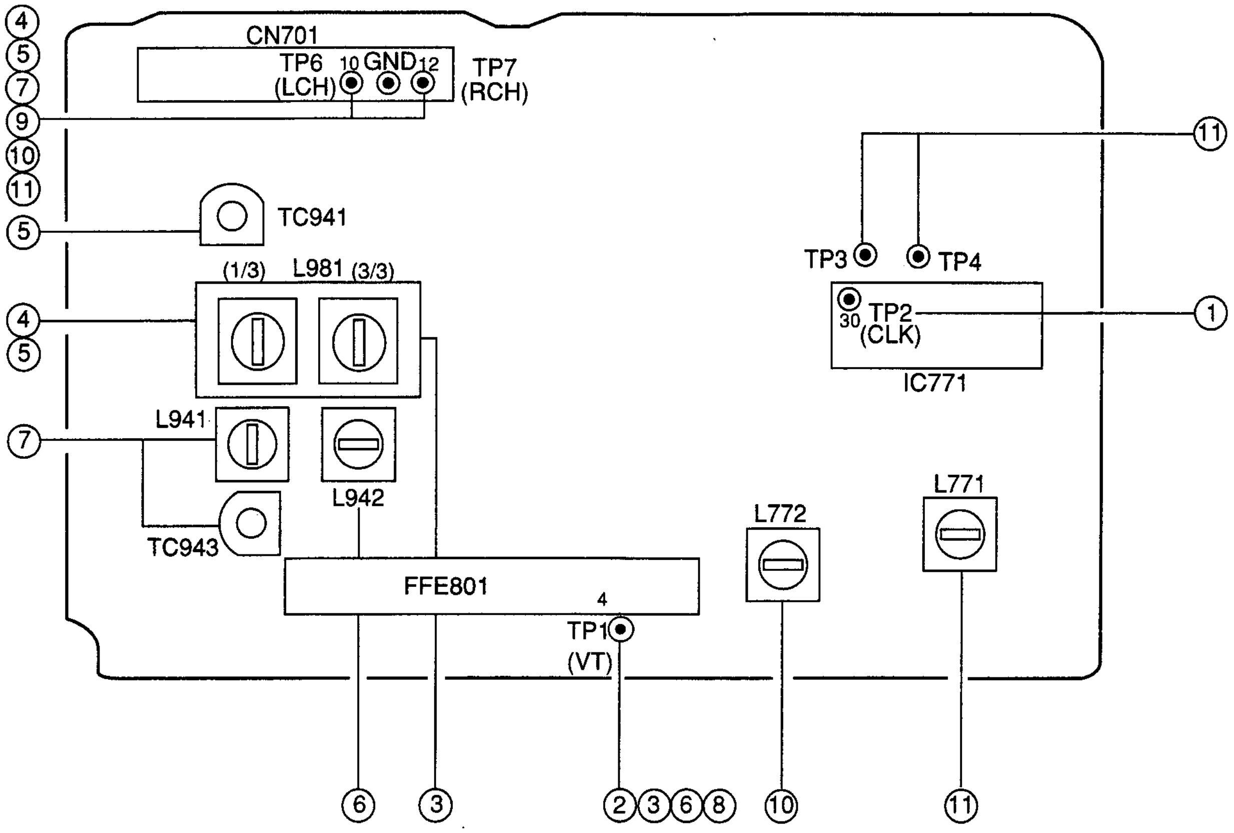
Pin No.	Pin Name	I/O	Description
66	P18/AM-10K	I/O	FL segment P18 output / AM 10kHz step initial diode input.
67	P17/AM-ST	I/O	FL segment P17 output / AM stereo select diode input.
68	P16/$\overline{\text{DSP}}$	I/O	FL segment P16 output / $\overline{\text{DSP}}$ select diode input.
69	P15/$\overline{\text{RHYTHM}}$	I/O	FL segment P15 output / $\overline{\text{RHYTHM IC}}$ select diode input.
70	P14/$\overline{\text{M-GEQ}}$	I/O	FL segment P14 output / $\overline{\text{MANUAL-GEQ}}$ select diode input.
71	P13/$\overline{\text{CST 2}}$	I/O	FL segment P13 output / Cassette (2) switch input (active: "L").
72	VDD4	–	Power supply.
73	P12/$\overline{\text{REB}}$	I/O	FL segment P12 output / REC enable (B) switch input (active: "L").
74	P11/$\overline{\text{CAM}}$	I/O	FL segment P11 output / CAM (2) switch input (active: "L").
75	P10/AUTO 1	I/O	FL segment P10 output / Auto stop reel (1) pulse input.
76	P9/AUTO 2	I/O	FL segment P9 output / Auto stop reel (2) pulse input.
77	P8/$\overline{\text{CAM 1}}$	I/O	FL segment P8 output / CAM (1) switch input (active: "L").
78	P7/$\overline{\text{CST 1}}$	I/O	FL segment P7 output / Cassette (1) switch input (active: "L").
79	P6/$\overline{\text{REA}}$	I/O	FL segment P6 output / REC enable (A) switch input (active: "L").
80 ~ 84	P5 ~ P1	O	FL segment P5 ~ P1 output.
85	$\overline{\text{K-SCAN}}$	O	KEY SCAN output (active: "L").
86	$\overline{\text{SOL 1}}$	O	DECK (1) solenoid $\overline{\text{ON}}$/OFF output.
87	$\overline{\text{SOL 2}}$	O	DECK (2) solenoid $\overline{\text{ON}}$/OFF output.
88	$\overline{\text{O-MOTOR}}$	O	Deck motor $\overline{\text{ON}}$/OFF output .
89	VSS2	–	Connected to GND.
90	VDD2	–	Power supply.
91	O–DISHREV	O	CD turn table dish reverse output.
92	O-DISHFWD	O	CD turn table dish forward output.
93	O-OPEN	O	CD tray open output.
94	O-CLOSE	O	CD tray close output.
95	IFC-$\overline{\text{TU}}$/I-SQDATA	I	Tuner tune/IF count input (active: "L") / CD SUB-Q data input.
96	O-SQCK/$\overline{\text{I-STEREO}}$	I/O	CD SUB-Q data read clock output / Tuner stereo detect input (Active "L").
97	O-DATA(CD)/ I-RDS DATA	I/O	CD IC control data output / Tuner RDS data input.
98	O-XLT	O	CD IC control data latch output.
99	CLK (CD)	O	CD IC control clock output.
100	2099STB	O	Shift register (BU2099) strobe output.

IC, LC72131D (Z)

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>X IN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>X-OUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Digital data input from CPU (LC876580W-5K75) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CL</td><td>I</td><td>To clock in the data DI.</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Digital data output to CPU (LC876580W-5K75).</td></tr>
<tr><td>7</td><td>T-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when $\overline{\text{MONO}}$ / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / SW</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$/SW</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IF-IN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>15</td><td>AM-IN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>FM-IN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>A-IN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>A-OUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>

ADJUSTMENT <TUNER/DECK>

C TUNER C.B



< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to AM 1710kHz(U,LH,HA),MW1602kHz(HR) and check that the test point is 2160kHz ± 45Hz(U,LH,HA), 2052kHz ± 45Hz(HR).

2. AM VT Check (U,LH,HA)
   Settings : • Test point : TP1 (VT)
   Method : Set to AM 1710kHz and AM 530kHz and check that the test point is less than 8.5V(1710kHz) and more than 0.6V(530kHz).

3. MW VT Adjustment (HR)
   Settings : • Test point : TP1(VT)
   • Adjustment location : L981(3/3)
   Method : Set to MW 1710kHz and adjust L981(3/3) so that the test point becomes 8.0V ± 0.05V. Then set to MW 530kHz and check that the test point is more than 0.3V.

4. AM Tracking Adjustment (U,LH,HA)
   Settings : • Test point : TP6(Lch), TP7(Rch)
   • Adjustment location :
   L981(1/3) .... 1000kHz(U)
   L981(1/3) .... 999kHz(LH,HA)
   Method : Set to AM 1000kHz(U),999kHz(LH,HA) and adjust L981(1/3) so that the test point is max.

5. MW Tracking Adjustment (HR)
   Settings : • Test point : TP6(Lch), TP7(Rch)
   • Adjustment location :
   L981(1/3) 603kHz
   TC941 .... 1404kHz
   Method : Set up TC941 to center before adjustment. The level at 603kHz is adjust to max. by L981(1/3). Then the level at 1404kHz is adjust to max. by TC941.

6. SW VT Adjustment (HR)
   Settings : • Test point : TP1(VT)
   • Adjustment location : L942
   Method : Set to SW 17.9MHz and adjust L942 so that the test point becomes 7.0V ± 0.05V. Then set to SW 5.9MHz and check that the test point is more than 0.3V.

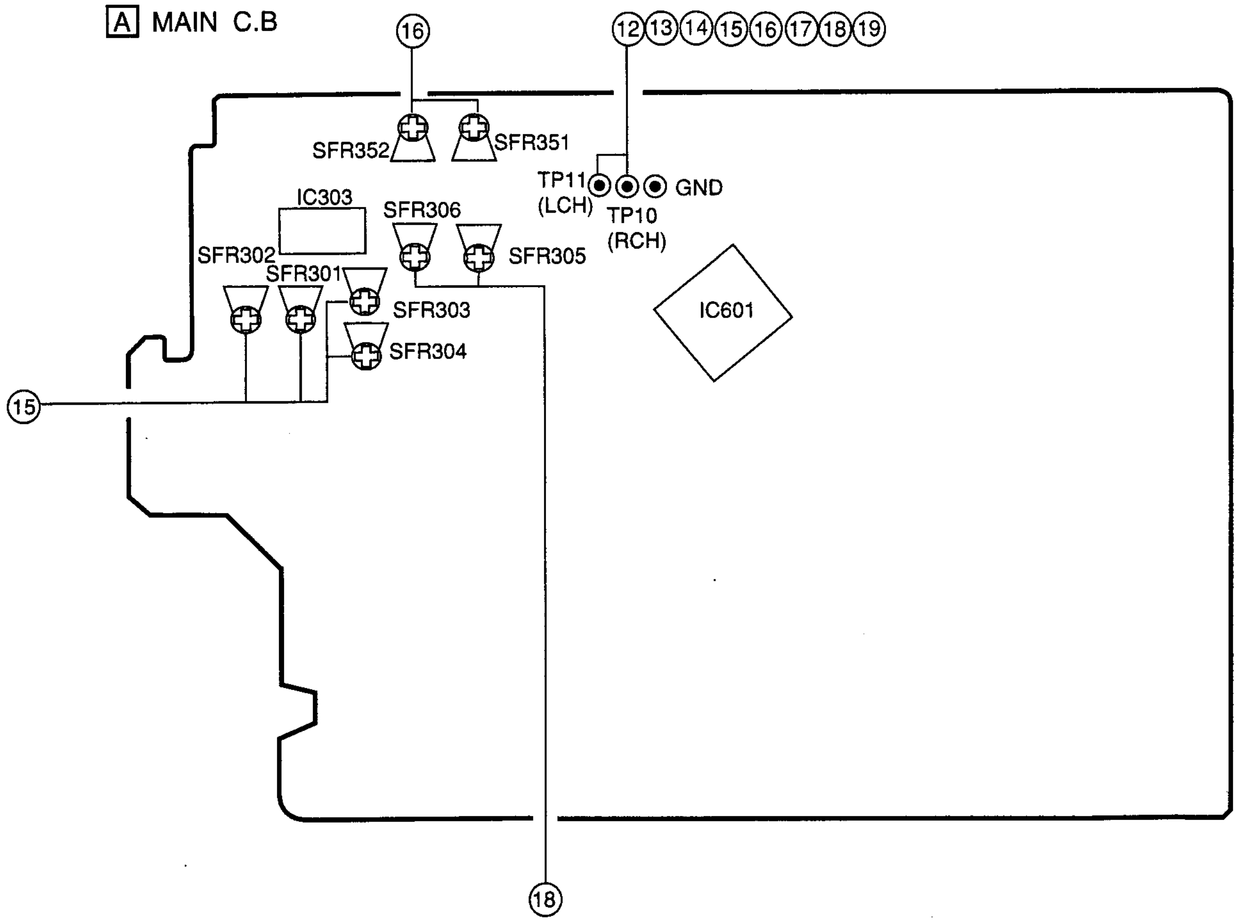
7. SW Tracking Adjustment (HR)
   Settings : • Test point : TP6(Lch), TP7(Rch)
   • Adjustment location :
   L941 .... 5.9MHz
   TC943 .... 17.9MHz
   Method : Set up TC943 to center before adjustment. The level at 5.9MHz is adjust to max. by L941. Then the level at 17.9MHz is adjust to max. by TC943.

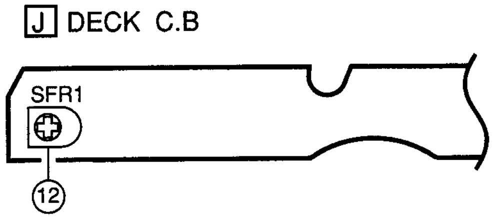
8. FM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to FM 108.0MHz and check that the test point is less than 8.0V.
Set to FM 87.5MHz and check that the test point is more than 0.5V.

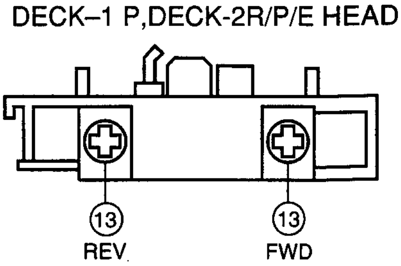
9. FM Tracking Check
Settings : • Test point : TP6(Lch), TP7(Rch)
Method : Set to FM 98.0MHz and check that the test point is less than 9.0dBμV.

10. AM IF Adjustment
Settings : • Test point : TP6(Lch), TP7(Rch)
• Adjustment location :
L772 .... 450kHz
Method : Adjust L772 so that the output becomes max.

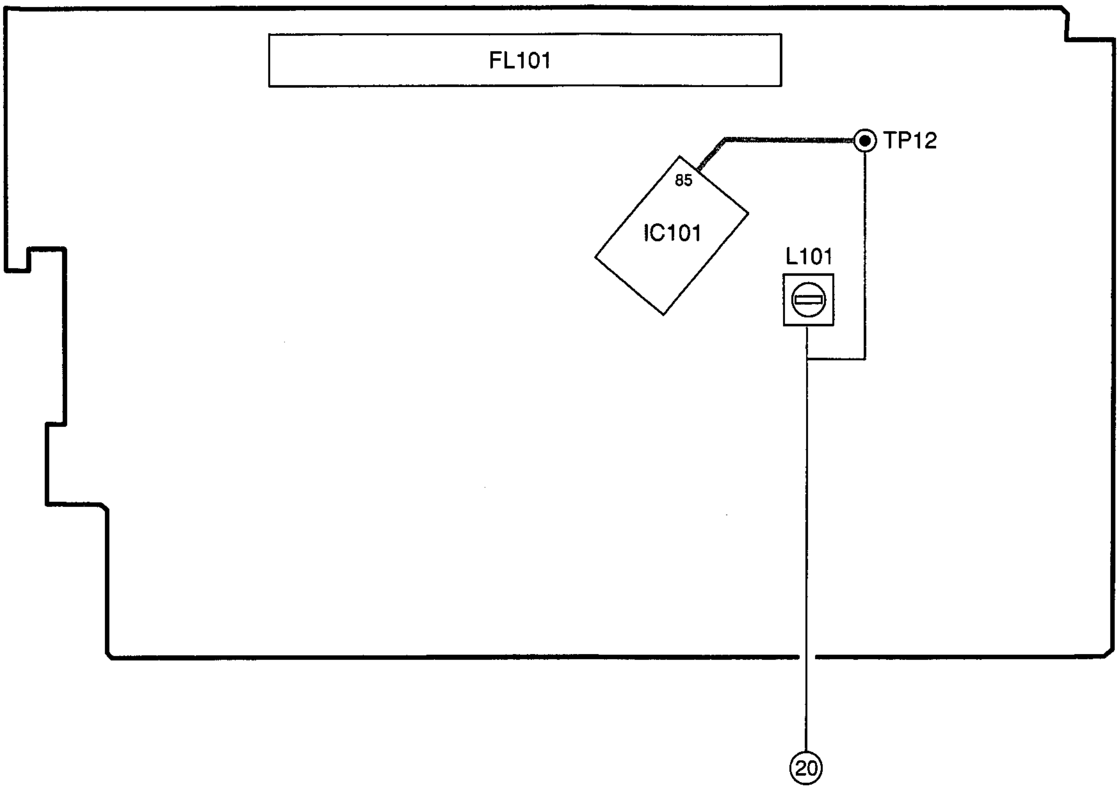
11. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3, TP4 (DC Balance)
TP6(Lch), TP7(Rch) (Distortion)
• Adjustment location : L771
• Input level : 60dBμV
Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%


A MAIN C.B
⑯
⑫⑬⑭⑮⑯⑰⑱⑲
SFR352
SFR351
TP11
(LCH)
GND
TP10
(RCH)
IC303
SFR306
SFR302
SFR301
SFR305
SFR303
SFR304
IC601
⑮
⑱


J DECK C.B
SFR1
⑫


DECK–1 P,DECK-2R/P/E HEAD
⑬
REV
⑬
FWD

B FRONT C.B



< DECK SECTION >

12. Tape Speed Adjustment (DECK 1, DECK 2)

Settings : • Test tape : TTA–100(3kHz)
• Test point : TP10(Rch), TP11(Lch)
• Adjustment location : SFR1

Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz(FWD) and ± 45Hz(REV) with respect to forward speed.

13. Head Azimuth Adjustment (DECK 1, DECK 2)

Settings : • Test tape : TTA–300 (315/10kHz)
• Test point : TP10(Rch), TP11(Lch)
• Adjustment location : Head azimuth adjustment screw

Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

14. PB Frequency Response Check (DECK 1, DECK 2)

Settings : • Test tape : TTA–300 (315/10kHz)
• Test point : TP10(Rch), TP11(Lch)

Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is within 0 ± 2dB.

15. PB Sensitivity Adjustment (DECK 1, DECK 2)

Settings : • Test tape : TTA–200 (400Hz)
• Test point : TP10(Rch), TP11(Lch)
• Adjustment location : SFR301 (DECK 1, Lch)
SFR302 (DECK 1, Rch)
SFR303 (DECK 2, Lch)
SFR304 (DECK 2, Rch)

Method : Play back the test tape and adjust SFRS so that the output level of the test points become 245mV±10mV.

16. REC/PB Frequency Response Adjustment (DECK 2)

Settings : • Test tape : TTA–602 (Normal)
• Test point : TP10(Rch), TP11(Lch)
• Input signal : 1kHz / 10kHz (LINE IN)
• Adjustment location : SFR351 (Lch)
SFR352 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 17mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

17. REC/PB Frequency response Check (DECK 2)

Settings : • Test tape : TTA-615 (CrO_2)
• Test point : TP10(Rch), TP11(Lch)
• Input signal : 1kHz/10kHz (LINE IN)

Method : Apply a 1kHz signal and REC mode. Then Adjust OSC attenuator so that the output level at the test points becomes 17mV. Record and play back the 1kHz and 10kHz signals and check that the output is 0dB ± 2dB.

18. REC/PB Sensitivity Adjustment (DECK 2)

Settings : • Test tape : TTA–602 (Normal)
• Test point : TP10(Rch), TP11(Lch)
• Input signal : 1kHz (LINE IN)
• Adjustment location : SFR305 (Lch)
SFR306 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 170mV. Record the play back the 1kHz signal and adjust SFRs so that the output level becomes 0dB ± 0.5dB.

19. REC/PB Sensitivity Check (DECK 2)
Settings : • Test tape : TTA-615 (CrO_2)
• Test point : TP10(Rch), TP11(Lch)
• Input signal : 1kHz (LINE IN)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 170mV. Record and play back the 1kHz signal and check that the output is 0dB ± 1.5dB.

20. µ-CON OSC Adjustment
Settings : • Test point : TP12
• Adjustment location : L101
Method : Insert AC plug with pressing TUNER function key. Adjust L101 so that the frequency across the test point is 210.5Hz ± 0.2Hz.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>
IHF Sensitivity : Less than 10dB
(THD 3%) [at 87.5MHz]
Less than 9dB
[at 98.0 / 108.0MHz]
S/N 50dB Quieting sensitivity (L-R) :
Less than 35dB
[at 98.0MHz]
Signal to noise ratio : MONO : More than 68dB
STEREO : More than 66dB
[at 98.0MHz]
Distortion : MONO : Less than 1.2%
STEREO : Less than 2.0%
[at 98.0MHz]
Auto stop level : 25dB ± 10dB
[at 98.0MHz]
Stereo separation : More than 22dB
[at 98.0MHz]
Intermediate frequency : 10.7MHz

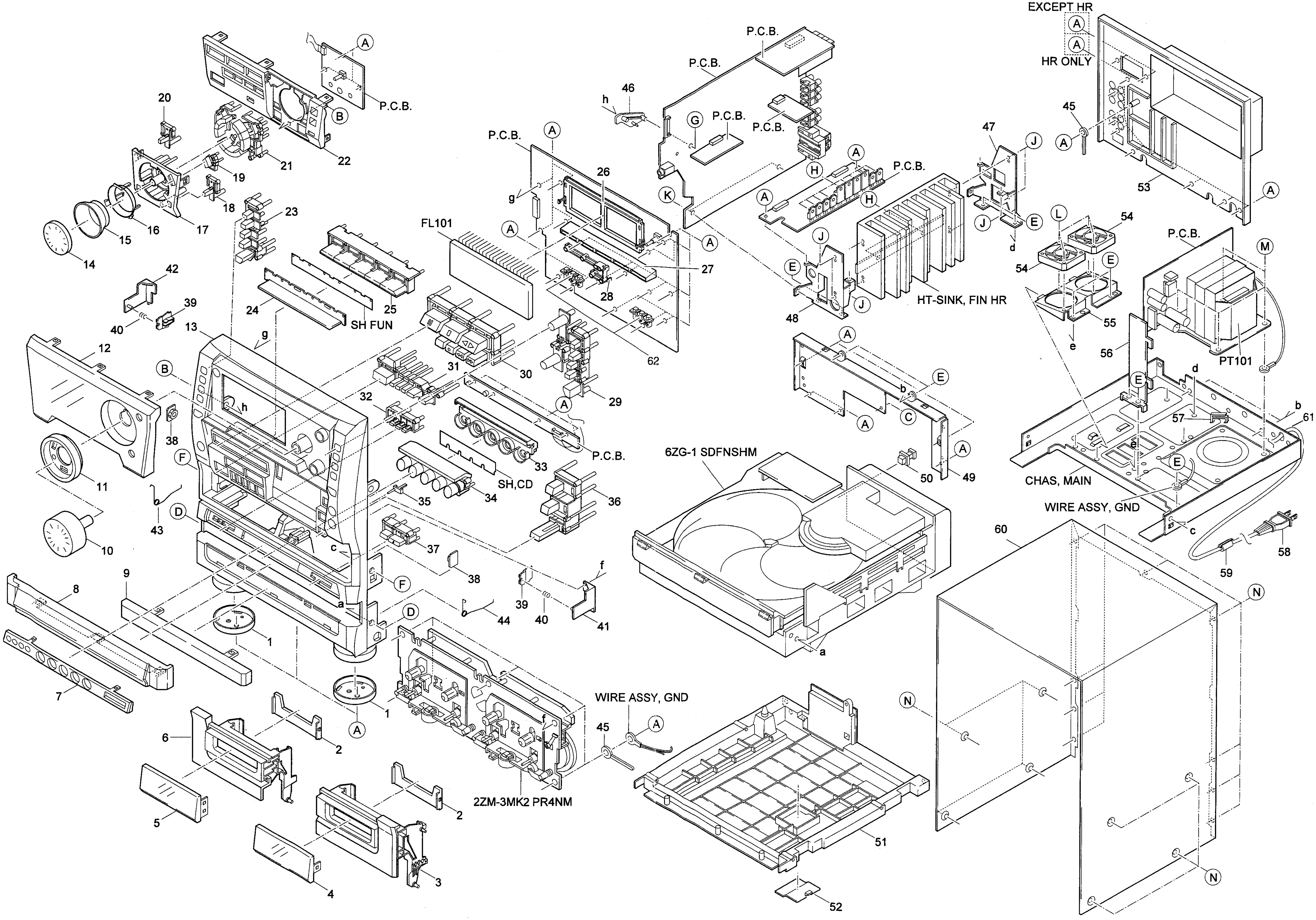
<AM(MW) SECTION>
Sensitivity : Less than 62dB
(S/N 20 dB) [at 600kHz<U>]
[at 603kHz<LH,HR,HA>]
Less than 58dB
[at 1000 / 1400kHz<U>]
[at 999/1404kHz<LH,HR,HA>]
Signal to noise ratio : More than 36dB
[at 1000kHz<U>]
[at 999kHz<LH,HR,HA>]
Distortion : Less than 1.5%
[at 1000kHz<U>]
[at 999kHz<LH,HR,HA>]
Auto stop level : 52dB + 10/-15dB
[at 1000kHz<U>]
[at 999kHz<LH,HR,HA>]
Intermediate frequency : 450kHz

<SW SECTION> (HR)
Sensitivity : Less than 51dB
(S/N 20dB) [at 5.9MHz]
Less than 45dB
[at 12.0MHz]
Less than 44dB
[at 17.9MHz]
Distortion : Less than 10.0%
[at 12.0MHz]

<DECK SECTION>

Tape speed : 3000Hz ± 45Hz
Wow & flutter : Less than 0.21% (W.R.M.S)
Pinch roller pressure : 270 ~ 330g (FWD, REV)
Take-up torque : 30 ~ 55g-cm (FWD, REV)
F.F & REW torque : 75 ~ 160g-cm
Back tension : 2 ~ 7g-cm (FWD, REV)
PB Output level : 245mV ± 1.0dB
PB/REC Output level : 0 ± 1.0dB(0VU,NORMAL)
-0.5 ± 1.0dB(0VU,CrO2)
Distortion (REC/PB) : Less than 2.0% (NORMAL, CrO2)
Noise level (PB) : Less than 3.0mV (NORMAL)
Noise level (REC/PB) : Less than 4.5mV (NORMAL)
Erasing ratio : More than 60dB (at 125Hz, 10VU)
Test tape : NORMAL : TTA–602
CrO2 : TTA–615

MECHANICAL EXPLODED VIEW 1/1


EXCEPT HR
A
A
HR ONLY
P.C.B.
P.C.B.
P.C.B.
P.C.B.
P.C.B.
P.C.B.
P.C.B.
P.C.B.
P.C.B.
A
B
G
H
K
J
E
L
M
C
D
F
N
a
b
c
d
e
f
g
h
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
FL101
SH FUN
SH,CD
HT-SINK, FIN HR
6ZG-1 SDFNSHM
CHAS, MAIN
WIRE ASSY, GND
WIRE ASSY, GND
PT101
2ZM-3MK2 PR4NM

MECHANICAL PARTS LIST 1/1

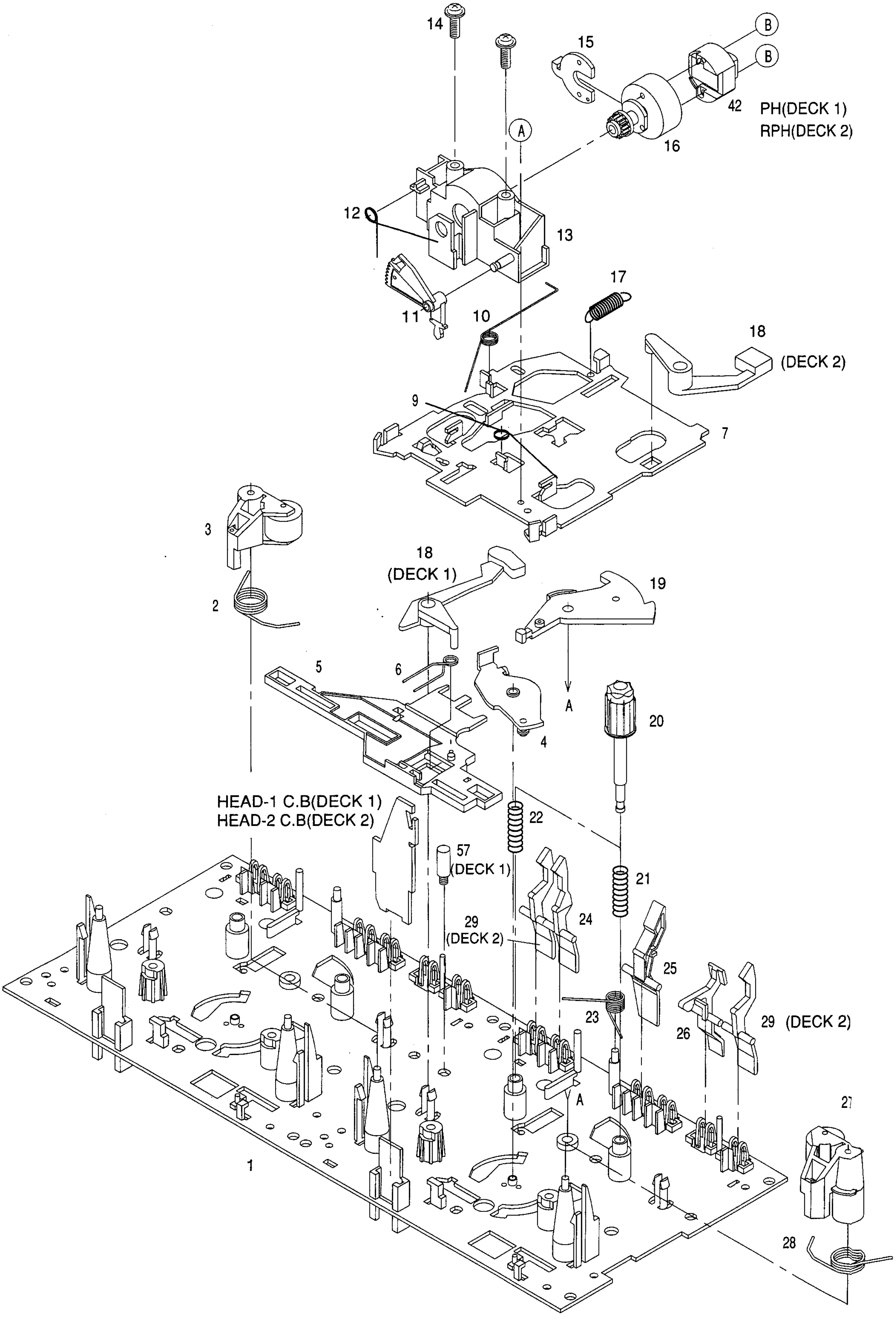
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

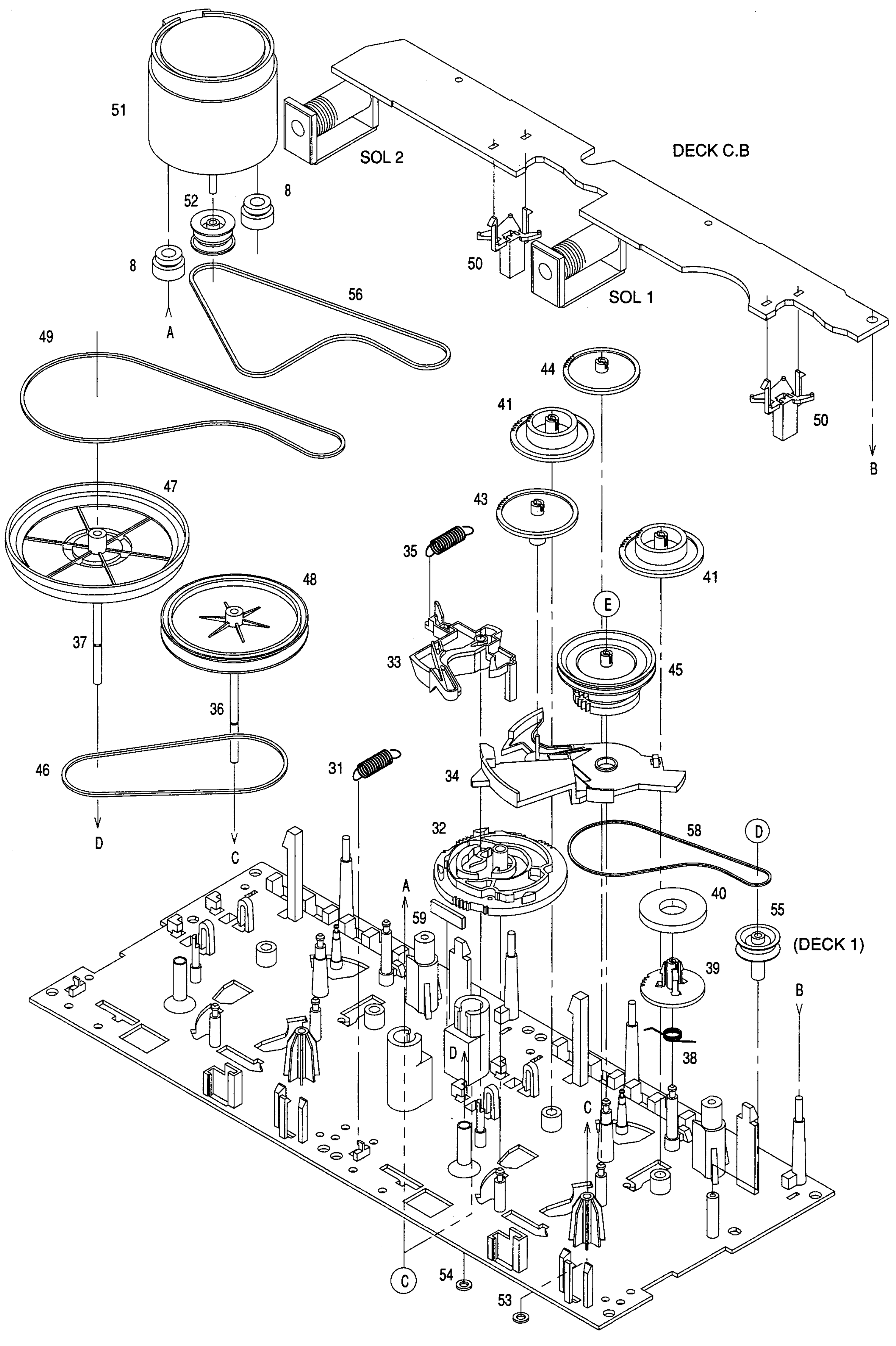
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-NF3-090-010		RING,FOOT
2	8Z-NF3-105-010		REFLECTOR,CASS
3	8Z-NF3-026-010		BOX,CASS R
4	8Z-NF3-056-010		WINDOW,CASS R
5	8Z-NF3-055-010		WINDOW,CASS L
6	8Z-NF3-025-010		BOX,CASS L
7	8Z-NF3-046-010		COVER, CD H
8	8Z-NF3-040-010		PANEL ASSY,TRAY
9	8Z-NF3-038-010		PANEL,CD
10	8Z-NF3-090-010		KNOB,RTRY MAIN
11	8Z-NF3-095-010		RING,MAIN
12	8Z-NF3-050-010		WINDOW,DISP
13	8Z-NF3-001-010		CABI,FR H<HR,LH,HA>
13	8Z-NF3-002-010		CABI,FR U<U>
14	8Z-NF3-091-010		KNOB,RTRY JOG
15	8Z-NF3-096-010		RING,JOG
16	8Z-NF3-107-010		REFLECTOR,JOG
17	8Z-NF3-039-010		PANEL,JOG
18	8Z-NF3-075-010		KEY,TIMER
19	8Z-NF3-077-010		KEY,ENTER
20	8Z-NF3-076-010		KEY,CLOCK
21	8Z-NF3-074-010		KEY,JOG
22	8Z-NF3-030-010		PANEL,FR<LH,HA>
22	8Z-NF3-032-010		PANEL,FR H<HR>
22	8Z-NF3-031-010		PANEL,FR U<U>
23	8Z-NF3-060-010		KEY,GEQ
24	8Z-NF3-106-010		REFLECTOR,FUN
25	8Z-NF3-062-010		KEY,FUN
26	8Z-NF3-210-010		GUIDE,FL
27	8Z-NF3-211-010		GUIDE,LED FUN
28	8Z-NF3-212-010		GUIDE,LED OPE
29	8Z-NF3-061-010		KEY,DSP
30	8Z-NF3-063-010		KEY ASSY,OPE
31	8Z-NF3-072-010		KEY,KARAOKE<LH,U,HA>
31	8Z-NF3-071-010		KEY,KARAOKE H<HR>
32	8Z-NF3-078-010		KEY,CD
33	8Z-NF3-213-010		GUIDE,LED DIRECT
34	8Z-NF3-079-010		KEY,DIRECT
35	8Z-NF3-108-010		REFLECTOR,ECO
36	8Z-NF3-073-010		KEY,BBE
37	8Z-NF3-080-010		KEY,OPEN
38	87-NF8-220-010		DMPR,150
39	82-NF5-229-010		PLATE,LOCK
40	86-NF9-224-010		SPR-C,LOCK
41	87-NF4-217-110		HLDR,LOCK 2
42	87-NF4-216-010		HLDR,LOCK 1
43	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
44	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
45	87-064-185-010		HLDR,WIRE
46	88-NF5-208-010		HLDR,PWB-M N
47	8Z-NF3-224-010		HLDR,HT-SINK 1
48	8Z-NF3-228-010		HLDR,HT-SINK R
49	8Z-NF3-029-010		PANEL,REAR
50	84-ZG1-245-210		CAP,OPTICAL
51	8Z-NF3-024-010		CABI,BOTTOM
52	8Z-NF3-048-010		COVER, BOTTOM
53	8Z-NF3-011-010		CABI,REAR HRJSTNM<HR>
53	8Z-NF3-012-010		CABI,REAR LHSTNM<LH>
53	8Z-NF3-010-010		CABI,REAR USTNM<U>
53	8Z-NF3-013-010		CABI,REAR HASTNM<HA>
54	87-A91-080-010		FAN, F614R-12MC-19-400MM
55	8Z-NF3-229-010		HLDR,FAN 4CH
56	8Z-NF3-227-010		HLDR,PWB PT
57	87-NF4-221-010		HLDR,CABLE
⚠ 58	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI<HR,LH>
⚠ 58	87-A80-110-010		AC CORD ASSY,U SPT-2W<U>
⚠ 58	87-A80-105-010		AC CORD ASSY,AZ<HA>
59	87-A90-562-010		F-BEAD,9.5-17.5-28.5 BRH
60	8Z-NF3-009-010		CABI,STEEL
61	87-085-185-010		BUSHING,AC CORD (E)<HA>
62	87-NB6-212-010		GUIDE,LED L IND
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-721-096-410		QT2+3-10
C	87-067-581-010		BVT2+3-15 W/O SLOT
D	87-721-097-410		QT2+3-12 GLD
E	87-067-688-010		BVTT+3-6
F	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)
G	87-067-579-010		BVT2+3-8 W/O SLOT
H	87-067-680-010		BVI T3+3-10
J	87-067-584-010		TAPPING SCREW, BVT2+3-6
K	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
L	87-067-698-010		TAPPING SCREW, BVT2+3-18
M	87-067-975-010		S-SCREW,IT+4-8
N	87-067-641-010		UTT2+3-8(W/O SLOT)BL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Sliver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

TAPE MECHANISM EXPLODED VIEW 1 / 1


14
B
15
B
A
42
PH(DECK 1)
RPH(DECK 2)
16
12
13
17
11
10
18
(DECK 2)
9
7
3
18
(DECK 1)
19
2
5
6
4
A
20
HEAD-1 C.B(DECK 1)
HEAD-2 C.B(DECK 2)
22
57
(DECK 1)
21
29
(DECK 2)
24
25
23
26
29 (DECK 2)
A
27
1
28

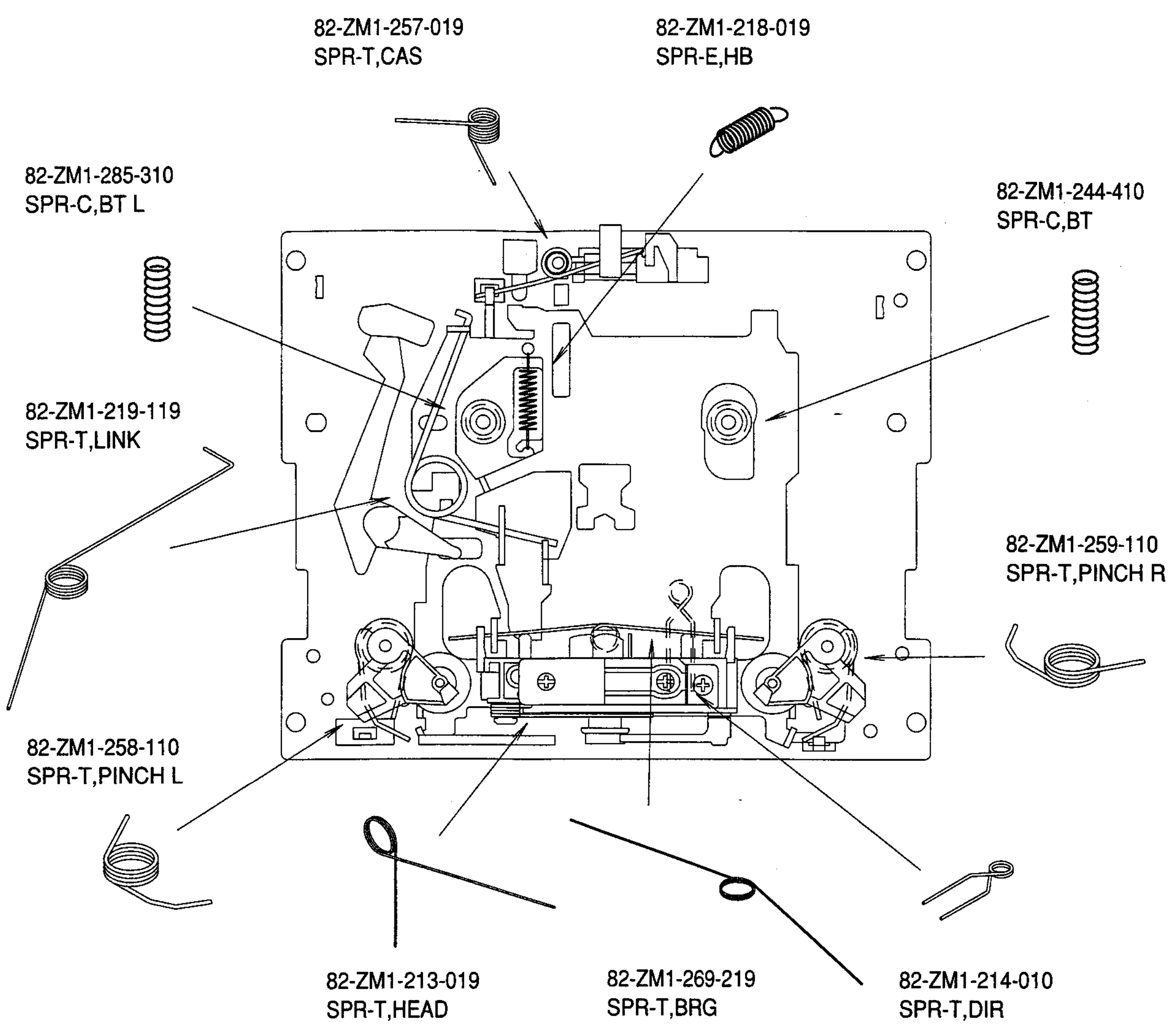


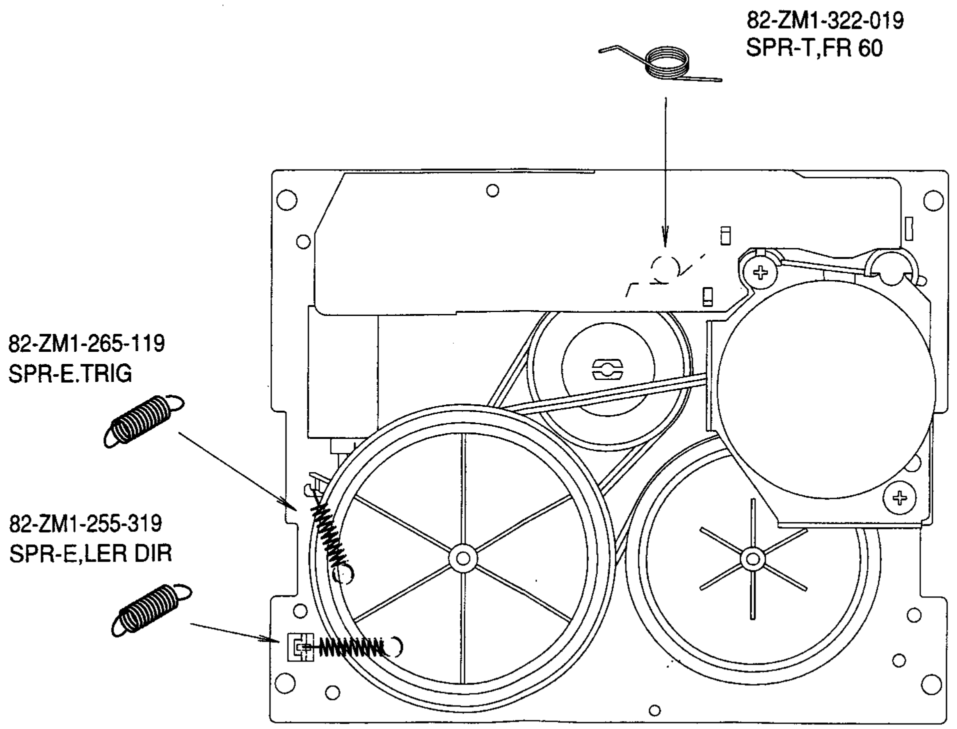
TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-341-110		LVR ASSY,PINCH L2
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	86-ZM4-206-010		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-344-110		LVR ASSY,PINCH R2
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-31K		GEAR,REEL
42	87-A90-319-010		HEAD,PH HADKH2 FPC
42	87-A90-320-010		HEAD,RPH HADKH5 FPC
43	82-ZM1-225-21K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM3-333-310		SLIP DISK ASSY 2
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-349-110		FLY-WHL,R W(DECK 2)
47	82-ZM3-338-110		FLY-WHL,R3 W(DECK 1)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 2)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 1)
49	82-ZM3-329-210		BELT,SBU R2
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-221-010		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-335-210		PULLEY,COUPLER M3(DECK 1)
56	82-ZM3-337-010		BELT,SBU MOT 2
57	82-ZM3-339-010		SHAFT,COUPLER N3(DECK 1)
58	86-ZM1-206-010		BELT,MAIN L
59	82-ZM3-340-010		SH,BELT D2
A	85-ZM3-202-010		S-SCREW,TG
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-B10-043-010		W-P,0.99-4-0.25 SLT
E	82-ZM3-334-010		PW,2.16-6-0.4

SPRING APPLICATION POSITION

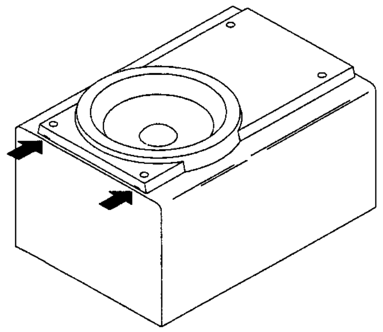

82-ZM1-257-019
SPR-T,CAS
82-ZM1-218-019
SPR-E,HB
82-ZM1-285-310
SPR-C,BT L
82-ZM1-244-410
SPR-C,BT
82-ZM1-219-119
SPR-T,LINK
82-ZM1-259-110
SPR-T,PINCH R
82-ZM1-258-110
SPR-T,PINCH L
82-ZM1-213-019
SPR-T,HEAD
82-ZM1-269-219
SPR-T,BRG
82-ZM1-214-010
SPR-T,DIR


82-ZM1-322-019
SPR-T,FR 60
82-ZM1-265-119
SPR-E.TRIG
82-ZM1-255-319
SPR-E,LER DIR

SPEAKER DISASSEMBLY INSTRUCTIONS

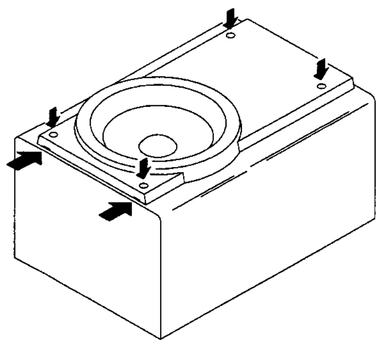
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



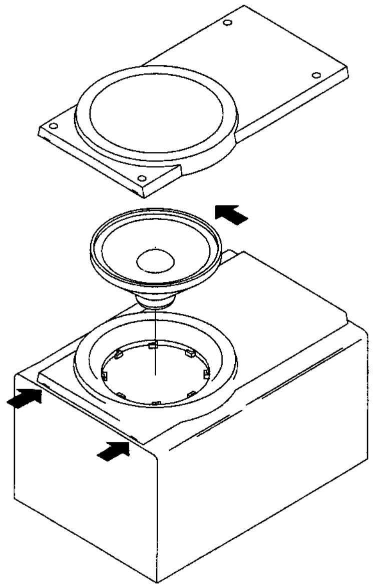
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

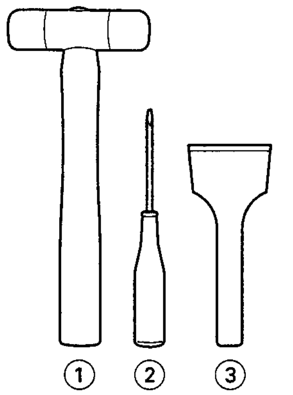


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction untill "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

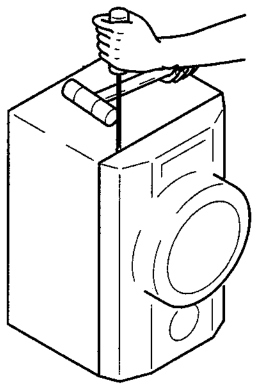


Fig-1

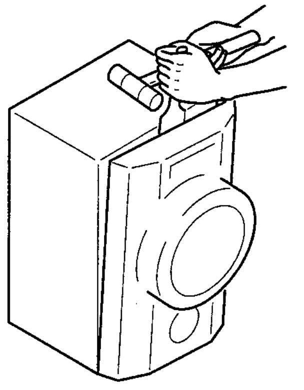


Fig-2

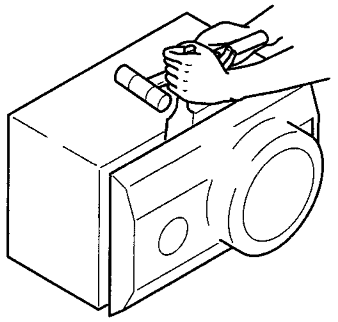


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SX-WND7 (YUSTL)
SPEAKER PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-NS3-602-110		SPKR,W 200
2	88-NS5-610-010		CORD,SPKR
3	88-NS5-611-010		CORD,SPKR B/L
4	88-NS6-606-010		SPKR, S 60
5	8Z-NS4-001-010		PANEL,FR
6	8Z-NS4-003-010		HLDR,TW L
7	8Z-NS4-004-010		HLDR,TW R
8	8Z-NS4-005-010		PANEL,TW L
9	8Z-NS4-006-010		PANEL,TW R
10	8Z-NS4-007-010		PROTECTOR,
11	8Z-NS4-008-010		PANEL,DUCT
12	8Z-NS4-009-010		PANEL,DUCT RING
13	8Z-NS5-604-010		SPKR, M 120
14	8Z-NSY-608-010		SPKR, CERAMIC ASSY (SWNH33)

SX-WNT9 (YJSTL,YLSTL)
SPEAKER PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NS3-001-010		PANEL,FR
2	8Z-NS3-002-010		PANEL,TW L
3	8Z-NS3-003-010		PANEL,TW R
4	8Z-NS3-004-010		PANEL,DUCT
5	8Z-NS3-005-010		PANEL,DUCT RING
6	8Z-NS3-007-010		PANEL,TOP
7	8Z-NS3-008-010		GRILLE,FRAME ASSY
8	8Z-NS3-011-010		CABI,TOP L
9	8Z-NS3-012-010		CABI,TOP R
10	88-NS5-610-010		CORD,SPKR
11	88-NS5-611-010		CORD,SPKR B/L
12	8Z-NSY-608-010		SPKR, CERAMIC ASSY (SWNH33)
13	88-NS3-602-110		SPKR,W 200
14	8Z-NS3-604-010		SPKR, M 100
15	88-NS5-605-010		SPKR,T 60

SX-R275 (YUSTNL)
SPEAKER PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-YS1-001-010		CABI,REAR
2	87-YS1-004-010		GRILLE FRAME ASSY
3	81-VSA-009-010		CORD BUSH
4	87-YS6-002-010		SPKR, CORD Y
5	87-YS6-601-010		SPKR, 100
6	87-010-384-010		CAP,E 100-25 SME(R275)
7	87-YS6-913-010		IB,YU(ESF)T

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NF3-901-010		IB,U(ESF)M<U>
1	8Z-NF3-902-010		IB,H(ECA)M<HR>
1	8Z-NF3-903-010		IB,LH(ESP)M<LH,HA>
2	87-006-225-010		AM LOOP ANT NC2<U,LH,HA>
2	87-006-269-010		ANT,LOOP AM<HR>
3	87-043-095-010		ANT,WIRE<HR>
4	87-043-115-010		ANT FEEDER FM
5	8Z-NF5-702-010		RC UNIT,RC-ZAS04
⚠ 6	87-099-789-010		PLUG,CONVERSION IR44<LH,HR>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENE	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G— —	
G— —	
G— —	

9620450, 9630472, 931261

アイワ株式会社
AIWA CO.,LTD.

Tokyo Japan

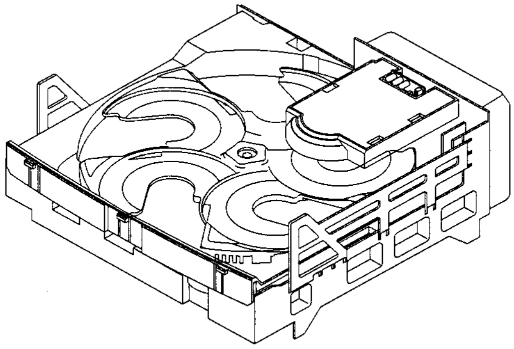
〒110-8710 東京都台東区池之端1-2-11 ☎03（3827）3111（代表）

Printed by: Schaltungsdienst Lange, Berlin (GERMANY)

aiwa
SERVICE

6ZG-1

English



SERVICE MANUAL

CD MECHANISM

BASIC CD MECHANISM : 3ZG-2 E1

TYPE
YSDFNSHCM
VOS1NDSM
YVOS1NDM
YSDNSHM
SDFNSHM

aiwa

S/M Code No. 09-994-326-2N2

TABLE OF CONTENTS

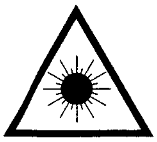
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING 3
Precaution to replace Optical block 3
DISASSEMBLY INSTRUCTIONS 4-6
ELECTRICAL MAIN PARTS LIST 7-9
TRANSISTOR ILLUSTRATION 10
BLOCK DIAGRAM-1 (YSDFNSHCM, YSDNSHM, SDFNSHM) 11, 12
BLOCK DIAGRAM-2 (VOS1NDSM, YVOS1NDM) 13, 14
WIRING-1 (YSDFNSHCM, YSDNSHM, SDFNSHM) 15, 16
SCHEMATIC DIAGRAM-1 (YSDFNSHCM, YSDNSHM, SDFNSHM) 17, 18
WIRING-2 (VOS1NDSM, YVOS1NDM) 19-22
SCHEMATIC DIAGRAM-2 (VOS1NDSM, YVOS1NDM 1/2) 23, 24
SCHEMATIC DIAGRAM-3 (VOS1NDSM, YVOS1NDM 2/2) 25, 26
WIRING-3 27
WAVE FORM 28-31
IC DESCRIPTION 32-48
IC BLOCK DIAGRAM 49-51
TEST MODE 52, 53
MECHANICAL EXPLODED VIEW 1/1 54
MECHANICAL PARTS LIST 1/1 55
CD MECHANISM EXPLODED VIEW 1/1 56
CD MECHANISM PARTS LIST 1/1 56
REFERENCE NAME LIST 57

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

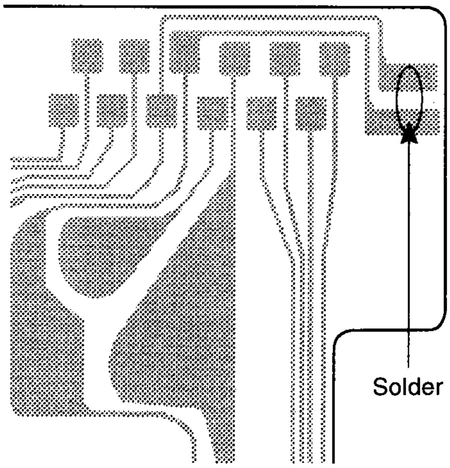
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block (KSS-213B)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



DISASSEMBLY INSTRUCTIONS

1. How to replace PICK UP.

1) Open the TRAY.
   Push the stopper to arrow direction and release half of the SHAFT SLED.
2) Turn GEAR MAIN CAM to the counterclockwise (arrow "a") direction, and lift up CD mechanism. (Fig-1)
3) Remove SHAFT SLED.
4) CD mechanism in down position, replace PICK UP.
5) Lift up CD mechanism (Fig-1), and Reassemble the SHAFT SLED.

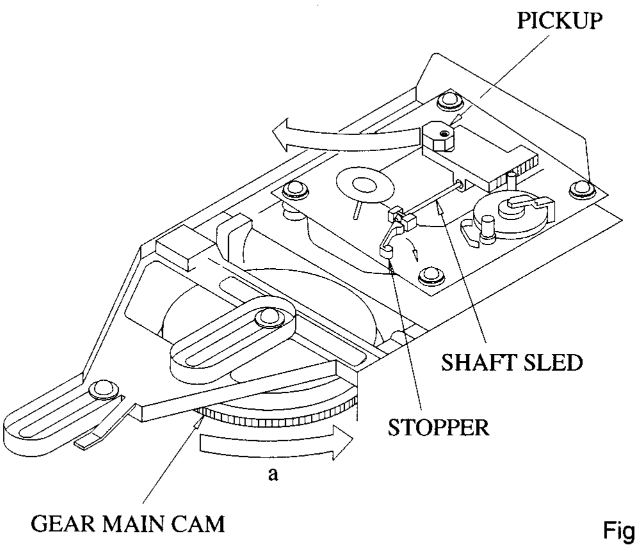

PICKUP
SHAFT SLED
STOPPER
a
GEAR MAIN CAM

Fig-1

2. How to remove the 5CD CHANGER BLOCK (Fig-2)

1) Remove the two FFC of the CD circuit board, and remove the five SCREWS.
2) Lift 5 CD CHANGER BLOCK from behind, and remove it. (5CD CHANGER BLOCK can be removed even if PANEL TRAY is not removed.)

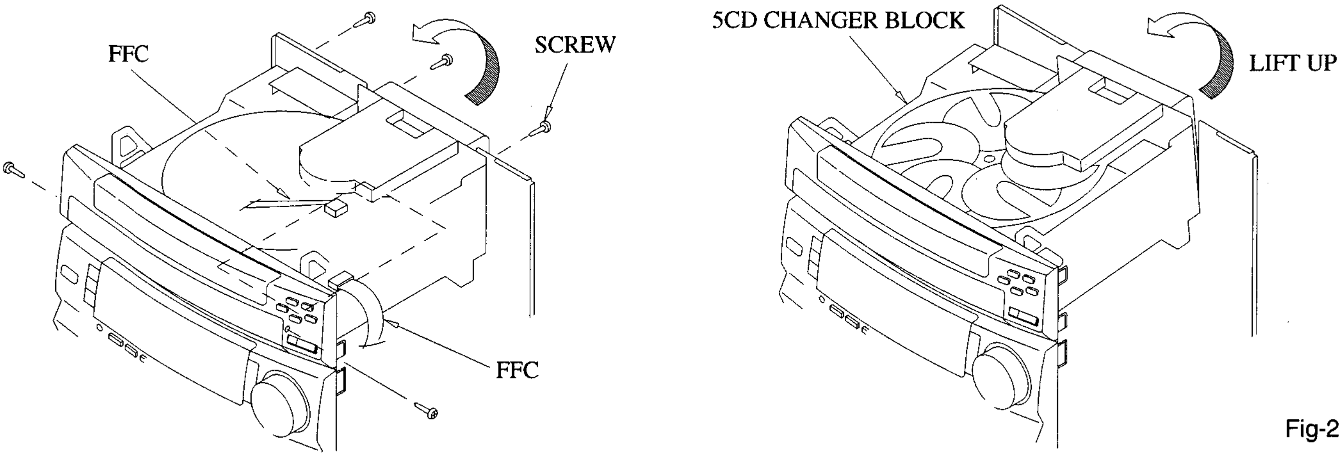

FFC
SCREW
FFC
5CD CHANGER BLOCK
LIFT UP

Fig-2

3. The disassemble and reassemble the TRAY

3-1. Disassembling procedure.

1) Push the PLATE GEAR'S Boss at the bottom part of CHAS MECHA strongly to the outside (arrow "b" direction). (Fig-3)
   (Confirm that TRAY appears a little in the front.)
2) Draw TRAY to the open position.
3) Remove FFC, and push the two LEVERS at both side of the CHAS MECH to remove TRAY. (Fig-4)

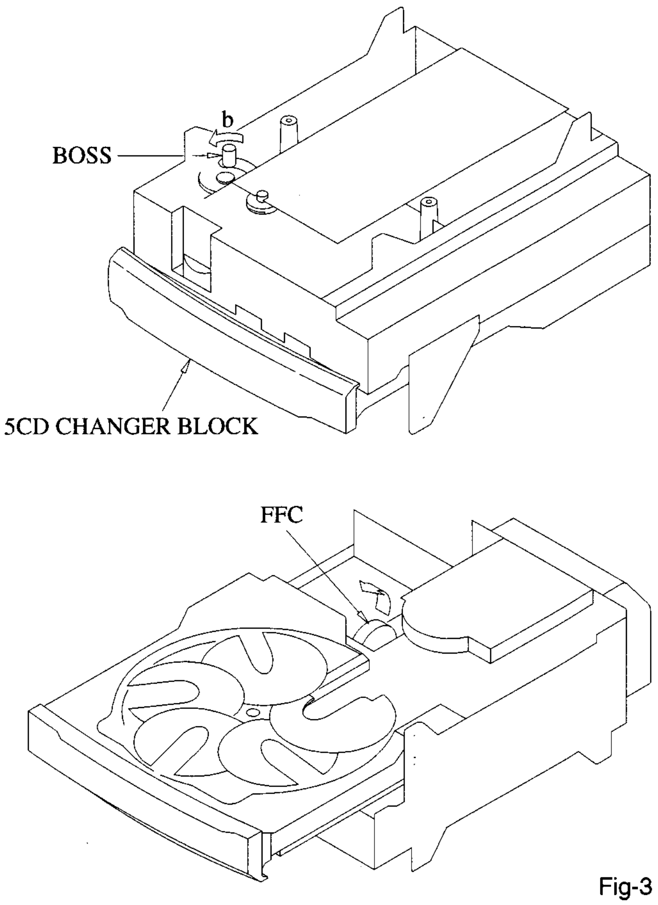


Fig-3

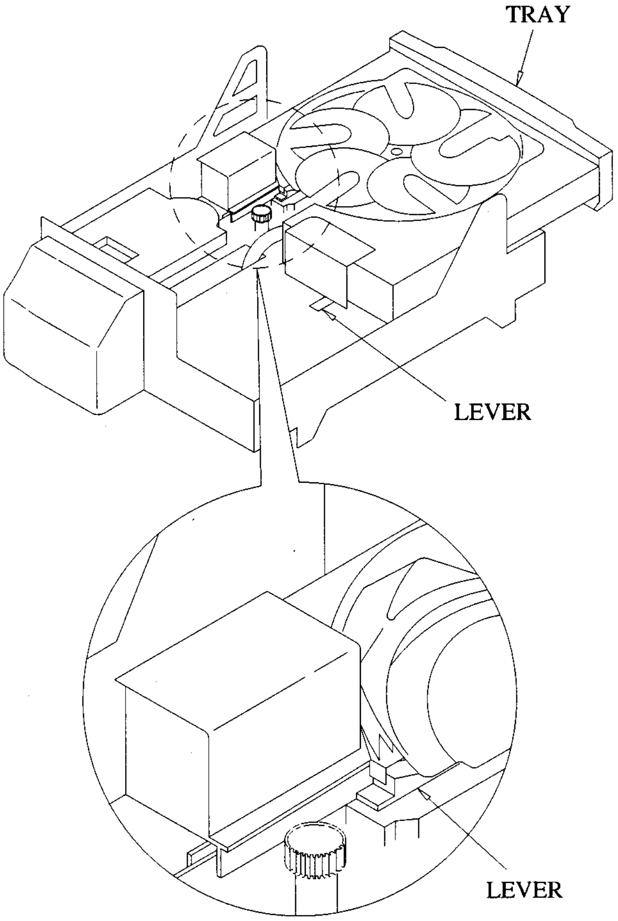


Fig-4

3-2. Reassembling procedure.

1) Confirm that LEVER TRAY is at the most right position and check for the CD Mechanism to be in the down position. (Fig-5)
2) Push in the TRAY along the rail of the CHAS MECHA.
3) After TRAY is half closed and FFC is put in, it can enter by force until the end of TRAY closed. (Fig-6)

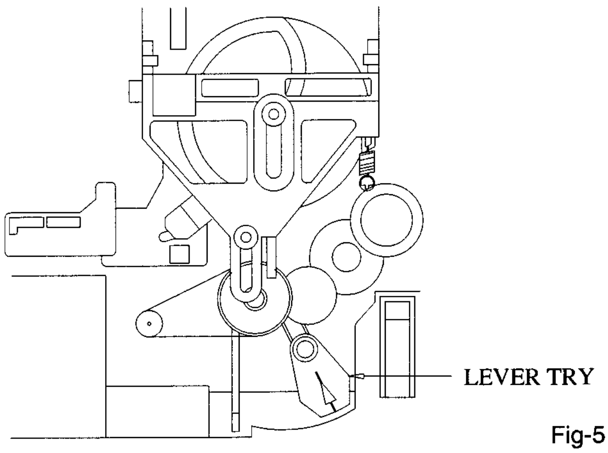


Fig-5

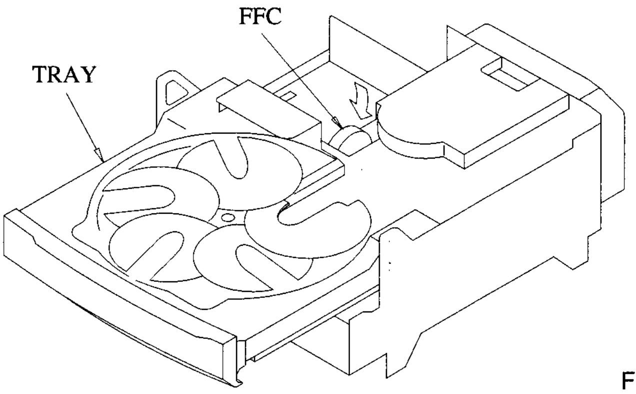


Fig-6

4. How to reassemble the TURN TABLE. (Fig-7)

1) Push LEVER TT in the direction of "C", and put in the TURN TABLE 5CD. (Fig-7)
   After reassembly, one of the TURN TABLE DISC TRAY (can be either one of the five disc trays) must be aligned with TURN TABLE 5CD. (Fig-8)
   That is, having no gap difference between the TURN TABLE 5CD and the TRAY 5CD.

* When reassembling the TURN TABLE 5CD, it is acceptable facing any CD number (1-5).

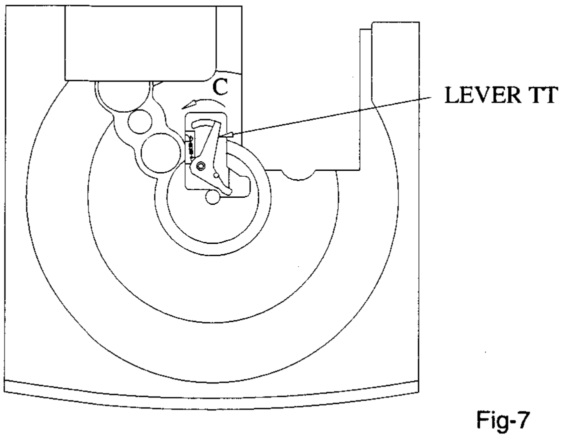


Fig-7

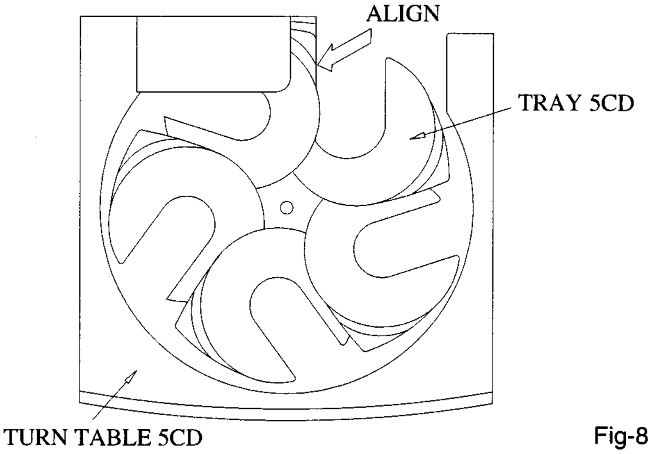


Fig-8

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR<EXCEPT YSDFNSHCM>
	87-A20-919-040		C-IC,BA5915FP<YVOS1NDM,VOS1NDSM>
	87-A20-917-010		C-IC,CXD2540Q-1/2 <YVOS1NDM,VOS1NDSM>
	87-A20-546-010		C-IC,CXD2589Q<SDFNSHM,YSDNSHM>
	87-A20-592-040		C-IC,M51943 AML<EXCEPT YSDFNSHCM>
	87-A20-602-040		C-IC,M5291FP<YVOS1NDM,VOS1NDSM>
	87-A20-925-040		C-IC,BA05FP<YVOS1NDM,VOS1NDSM>
	87-A20-905-040		C-IC,BA033FP<YVOS1NDM,VOS1NDSM>
	87-070-305-010		IC,BA6897S<SDFNSHM,YSDNSHM>
	87-001-982-010		IC,TA7291S<EXCEPT YSDFNSHCM>
	87-A20-918-040		C-IC,SM5878AM<YVOS1NDM,VOS1NDSM>
	87-A20-653-010		C-IC,RL5C293<YVOS1NDM,VOS1NDSM>
	87-017-825-010		IC,GP1F32T<YVOS1NDM,VOS1NDSM>
	86-ZG1-658-010		C-IC,CXP84548-112Q <YVOS1NDM,VOS1NDSM>
	87-A20-895-010		C-IC,CXD1856R<YVOS1NDM,VOS1NDSM>
	87-A20-921-040		C-IC,SN74LVU04APW <YVOS1NDM,VOS1NDSM>
	87-A20-249-040		C-IC,BU2874FV<YVOS1NDM,VOS1NDSM>
	87-A20-962-040		C-IC,MSM54V16258B/BSL <YVOS1NDM,VOS1NDSM>
	87-A20-957-040		C-IC,SN74LV245APW <YVOS1NDM,VOS1NDSM>
	86-ZG1-655-040		C-IC,MSM531031B-72GS-KR1 <YVOS1NDM,VOS1NDSM>
	87-A21-099-040		C-IC,HD74HC393FP <YVOS1NDM,VOS1NDSM>
TRANSISTOR			
	89-406-555-080		TR,2SD655 (0.5W)<SDFNSHM,YSDNSHM>
	89-111-625-080		TR,2SA1162 (0.15W) <YVOS1NDM,VOS1NDSM>
	87-026-463-080		TR,2SA933S (0.3W) <SDFNSHM,YSDNSHM>
	87-026-237-080		CHIP-TR,DTC124XK <YVOS1NDM,VOS1NDSM>
	87-A30-117-010		TR,2SA1357<YVOS1NDM,VOS1NDSM>
	87-026-231-080		CHIP-TRANSISTER,DTA124XK <YVOS1NDM,VOS1NDSM>
	89-421-722-380		TR,2SD2172V/W<EXCEPT YSDFNSHCM>
	89-320-011-080		TR,2SC2001 (15W) <EXCEPT YSDFNSHCM>
	87-026-223-080		TR,DTC143TK<EXCEPT YSDFNSHCM>
	89-110-155-080		TR,2SA1015(0.4W)<SDFNSHM,YSDNSHM>
	87-026-580-080		C-TR,DTA123JK<EXCEPT YSDFNSHCM>
	89-327-125-080		CHIP TR,2SC2712GR <EXCEPT YSDFNSHCM>
	87-026-470-080		TR,HN1C03F (0.3W) <YVOS1NDM,VOS1NDSM>
	87-026-210-080		CHIP-TR,DTC144EK <YVOS1NDM,VOS1NDSM>
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184 <YVOS1NDM,VOS1NDSM>
	87-020-465-080		DIODE,1SS133 (110MA) <SDFNSHM,YSDNSHM>
	87-A40-180-040		C-DIODE,SB07-015C <YVOS1NDM,VOS1NDSM>
	87-018-199-080		CAP, CER 3300P<SDFNSHM,YSDNSHM>
5CD C.B<EXCEPT YVOS1NDM,V 1NDSM>			
	86-ZG1-605-010		CABLE,FFC 16P
	86-ZG1-667-010		F-CABLE,8P 1.25 175MM BLACK
C1	87-010-196-080		CHIP CAPACITOR,0.1-25
C2	87-010-260-080		CAP, ELECT 47-25V
C4	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C101	87-010-263-040		CAP,E 100-10
C102	87-010-178-080		CHIP CAP 1000P
C103	87-010-550-040		CAP,E 100-6.3 GAS
C104	87-010-182-080		C-CAP,S 2200P-50 B
C105	87-010-198-080		CAP, CHIP 0.022
C106	87-016-081-080		C-CAP,S 0.1-16 RK
C107	87-016-081-080		C-CAP,S 0.1-16 RK
C108	87-016-081-080		C-CAP,S 0.1-16 RK
C109	87-010-497-040		CAP,E 4.7-35 GAS
C110	87-016-081-080		C-CAP,S 0.1-16 RK
C111	87-010-197-080		CAP, CHIP 0.01 DM
C112	87-010-402-040		CAP,E 2.2-50
C113	87-010-382-040		CAP,E 22-25 SME
C114	87-010-213-080		C-CAP,S 0.015-50 B
C115	87-010-263-040		CAP,E 100-10
C116	87-010-197-080		CAP, CHIP 0.01 DM
C117	87-010-369-080		C-CAP,S 0.033-25 K B
C118	87-010-197-080		CAP, CHIP 0.01 DM
C119	87-010-369-080		C-CAP,S 0.033-25 K B
C120	87-010-197-080		CAP, CHIP 0.01 DM
C121	87-010-494-040		CAP,E 1-50 GAS
C122	87-010-154-080		CAP CHIP 10P
C123	87-010-154-080		CAP CHIP 10P
C124	87-010-154-080		CAP CHIP 10P
C125	87-010-596-080		CAP, S 0.047-16
C126	87-010-596-080		CAP, S 0.047-16
C127	87-012-140-080		CAP 470P
C128	87-010-596-080		CAP, S 0.047-16
C129	87-010-198-080		CAP, CHIP 0.022
C130	87-016-081-080		C-CAP,S 0.1-16 RK
C131	87-010-550-040		CAP,E 100-6.3 GAS
C132	87-010-550-040		CAP,E 100-6.3 GAS
C133	87-012-158-080		C-CAP,S 390P-50 CH
C150	87-010-145-080		C-CAP,S 1P-50 CH
C202	87-010-596-080		CAP, S 0.047-16
C203	87-010-188-080		CAP,CHIP 6800P
C204	87-012-156-080		C-CAP,S 220P-50 CH
C205	87-018-134-080		CAPACITOR,TC-U 0.01-16
C206	87-010-400-040		CAP,E 0.47-50
C207	87-010-197-080		CAP, CHIP 0.01 DM
C208	87-010-318-080		C-CAP,S 47P-50 CH
C209	87-012-154-080		C-CAP,S 150P-50 CH
C210	87-012-154-080		C-CAP,S 150P-50 CH
C211	87-010-176-080		C-CAP,S 680P-50 SL
C212	87-010-176-080		C-CAP,S 680P-50 SL
C213	87-010-401-040		CAP,E 1-50 SME
C213	87-010-382-040		CAP,E 22-25 SME
C214	87-010-401-040		CAP,E 1-50 SME
C214	87-010-382-040		CAP,E 22-25 SME
C215	87-010-318-080		C-CAP,S 47P-50 CH
C216	87-010-318-080		C-CAP,S 47P-50 CH
C217	87-010-380-040		CAP,E 47-16 SME
C218	87-010-197-080		CAP, CHIP 0.01 DM
C219	87-010-196-080		CHIP CAPACITOR,0.1-25
C220	87-010-370-040		CAP,E 330-6.3 SME
C221	87-010-197-080		CAP, CHIP 0.01 DM
C222	87-010-186-080		CAP,CHIP 4700P
C223	87-016-081-080		C-CAP,S 0.1-16 RK
C228	87-018-209-080		CAP, CER 0.1-50V
C230	87-010-197-080		CAP, CHIP 0.01 DM
C231	87-018-209-080		CAP, CER 0.1-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-403-040		CAP,E 3.3-50 SME
C501	87-016-459-040		CAP,E 470-10 SMG
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-263-040		CAP,E 100-10
C504	87-010-196-080		CHIP CAPACITOR,0.1-25
C505	87-010-196-080		CHIP CAPACITOR,0.1-25
C506	87-010-196-080		CHIP CAPACITOR,0.1-25
C507	87-010-196-080		CHIP CAPACITOR,0.1-25

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C508	87-016-459-040		CAP,E 470-10 SMG
C509	87-010-196-080		CHIP CAPACITOR,0.1-25
C510	87-010-196-080		CHIP CAPACITOR,0.1-25
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-016-251-040		CAP,E 220-16 SMG
C603	87-010-196-080		CHIP CAPACITOR,0.1-25
C701	87-010-322-080		C-CAP,S 100P-50 CH
C702	87-010-318-080		C-CAP,S 47P-50 CH
C703	87-010-318-080		C-CAP,S 47P-50 CH
C705	87-010-178-080		CHIP CAP 1000P
C901	87-010-260-040		CAP,E 47-25 SME
C902	87-010-196-080		CHIP CAPACITOR,0.1-25
C991	87-010-196-080		CHIP CAPACITOR,0.1-25
C992	87-010-196-080		CHIP CAPACITOR,0.1-25
C993	87-010-196-080		CHIP CAPACITOR,0.1-25
C994	87-010-196-080		CHIP CAPACITOR,0.1-25
CN3	86-ZG1-609-010		CONN ASSY,6P
CN7	86-ZG1-606-010		CONN ASSY 2P
CON1	87-A60-424-010		CONN,16P V TOC-B
CON2	87-009-034-010		CONN,6P PH V
CON3	87-A60-133-010		CONN,8P V FE
CON5	87-A60-154-010		CONN,6P H FE
CON6	87-A60-162-010		CONN,14P H FE
JR9	83-XM1-617-080		C-COIL,BK2125HM601
JR28	83-XM1-617-080		C-COIL,BK2125HM601
JW8	87-018-115-080		CAP, CER 47P-50V
JW42	87-003-223-010		FERRITE BEAD BLO2RN2
JW47	87-003-223-010		FERRITE BEAD BLO2RN2
JW48	87-026-689-080		PROTECTOR,1A 60V 491
JW72	87-003-223-010		FERRITE BEAD BLO2RN2
L101	87-003-102-080		COIL, 10UH
L201	87-003-102-080		COIL, 10UH
LED901	87-A40-123-010		LED,SLZ-8128A-01-B
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R101	87-022-363-080		C-RES,S 68K-1/10W F
R102	87-022-363-080		C-RES,S 68K-1/10W F
R103	87-022-363-080		C-RES,S 68K-1/10W F
R104	87-022-363-080		C-RES,S 68K-1/10W F
R105	87-022-365-080		C-RES,S 100K-1/10W F
R106	87-022-365-080		C-RES,S 100K-1/10W F
R420	87-029-060-080		RES,FUSE 33-1/4 W
SW601	87-036-109-010		PUSH SWITCH
SW602	87-036-109-010		PUSH SWITCH
SW603	87-036-109-010		PUSH SWITCH
X201	87-A70-046-010		VIB,XTAL 16.934MHZ

VCD C.B<YVOS1NDM,VOS1NDSM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	86-ZG1-605-010		CABLE,FFC 16P
	86-ZG1-667-010		F-CABLE,8P 1.25 175MM BLACK
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-404-040		CAP,E 4.7-50 SME
C106	87-010-369-080		C-CAP,S 0.033-25 K B
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-401-040		CAP,E 1-50 SME
C109	87-010-382-040		CAP,E 22-25 SME
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-263-040		CAP,E 100-10
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-010-369-080		C-CAP,S 0.033-25 K B
C114	87-010-369-080		C-CAP,S 0.033-25 K B
C115	87-010-369-080		C-CAP,S 0.033-25 K B
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-012-154-080		C-CAP,S 150P-50 CH
C118	87-010-401-040		CAP,E 1-50 SME
C119	87-010-311-080		CAP 12P
C120	87-010-596-080		CAP, S 0.047-16
C121	87-010-596-080		CAP, S 0.047-16
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-263-040		CAP,E 100-10
C130	87-010-263-040		CAP,E 100-10
C131	87-010-263-040		CAP,E 100-10
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-263-040		CAP,E 100-10
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-182-080		C-CAP,S 2200P-50 B
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-010-384-040		CAP,E 100-25 SME
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-197-080		CAP, CHIP 0.01 DM
C144	87-010-196-080		CHIP CAPACITOR,0.1-25
C145	87-010-196-080		CHIP CAPACITOR,0.1-25
C149	87-010-213-080		C-CAP,S 0.015-50 B
C151	87-010-263-040		CAP,E 100-10
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-016-251-040		CAP,E 220-16 SMG
C154	87-010-196-080		CHIP CAPACITOR,0.1-25
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-016-669-080		C-CAP,S 0.1-25 K B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-010-197-080		CAP, CHIP 0.01 DM
C161	87-010-182-080		C-CAP,S 2200P-50 B
C300	87-010-197-080		CAP, CHIP 0.01 DM
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-384-040		CAP,E 100-25 SME
C306	87-016-251-040		CAP,E 220-16 SMG
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-263-040		CAP,E 100-10
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-263-040		CAP,E 100-10
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C401	87-010-403-040		CAP,E 3.3-50 SME
C402	87-010-403-040		CAP,E 3.3-50 SME
C411	87-018-214-080		CAP TC U 0.1-50F
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-016-251-040		CAP,E 220-16 SMG
C603	87-010-196-080		CHIP CAPACITOR,0.1-25
C706	87-010-184-080		CHIP CAPACITOR 3300P(K)
C707	87-010-184-080		CHIP CAPACITOR 3300P(K)
C708	87-010-184-080		CHIP CAPACITOR 3300P(K)
C709	87-010-184-080		CHIP CAPACITOR 3300P(K)
C801	87-010-197-080		CAP, CHIP 0.01 DM
C802	87-010-197-080		CAP, CHIP 0.01 DM
C803	87-010-384-040		CAP,E 100-25 SME
C804	87-010-196-080		CHIP CAPACITOR,0.1-25
C805	87-010-196-080		CHIP CAPACITOR,0.1-25
C806	87-010-196-080		CHIP CAPACITOR,0.1-25
C807	87-010-313-080		CAP, CHIP 18P
C808	87-010-313-080		CAP, CHIP 18P
C809	87-010-178-080		CHIP CAP 1000P
C810	87-010-178-080		CHIP CAP 1000P
C811	87-010-178-080		CHIP CAP 1000P
C812	87-010-178-080		CHIP CAP 1000P
C813	87-010-405-040		CAP,E 10-50
C814	87-010-405-040		CAP,E 10-50

30	CAP, CHIP 0.01 DM
30	CAP, CHIP 0.01 DM
30	CHIP CAPACITOR,0.1-25
30	CHIP CAPACITOR,0.1-25
30	CAP, CHIP 0.01 DM
30	CAP 470P
30	CAP 470P
30	C-CAP,S 100P-50 CH
40	CAP,E 470-10 SMG
40	CAP,E 10-50
30	CAP, CHIP 0.01 DM
40	CAP,E 10-50
30	CAP, CHIP 0.01 DM
30	CAP, CHIP 0.01 DM
30	CAP, CHIP 0.01 DM
30	CAP, CHIP 0.01 DM
40	CAP,E 10-50
30	CAP, CHIP 0.01 DM
30	C-CAP,S 100P-50 CH
30	CAP, CHIP 0.01 DM
30	CAP, CHIP 0.01 DM
30	CHIP CAPACITOR,0.1-25
30	CHIP CAPACITOR,0.1-25
40	CAP,E 10-50
30	CAP, S 1-16
30	CAP, CHIP 0.01 DM
30	C-CAP,S 100P-50 CH
40	CAP,E 10-50
30	CAP, S 1-16
30	CAP CHIP 10P
30	CAP CHIP 10P
30	C-CAP,S 33P-50 CH
30	C-CAP,S 33P-50 CH
30	CAP, S 1-16
30	CAP, S 1-16
30	CHIP CAPACITOR,0.1-25
30	CHIP CAPACITOR,0.1-25
30	CHIP CAPACITOR,0.1-25
30	CAP, S 1-16
30	CAP, S 1-16
30	CAP, S 1-16
30	CAP, S 1-16
30	CAP, S 1-16
30	CAP, S 1-16
30	CAP, S 1-16
30	CHIP CAPACITOR,0.1-25
30	C-CAP,S 100P-50 CH
30	C-CAP,S 100P-50 CH
10	CONN ASSY,6P
10	CONN,8P V FE
10	CONN,12P H FE
10	CONN ASSY 2P
10	CONN ASSY 2P
10	CONN,16P V TOC-B
10	CONN,6P PH V
10	CONN,6P H FE
10	CONN ASSY,2P VIDEO-SW
10	CONN,2P V S2M-2W

[illegible]	[illegible]	COIL,10UH
L151	87-005-204-080	COIL,47UH
L301	87-A50-095-010	COIL,68UH RCR875D
L302	87-005-469-080	COIL 4.7UH FLR50
L851	87-005-196-080	COIL,10UH
L852	87-005-466-080	COIL,2.7UH J FLR50
L853	87-005-196-080	COIL,10UH
L891	87-005-196-080	COIL,10UH
L901	87-005-196-080	COIL,10UH
L941	87-005-196-080	COIL,10UH
M601	87-045-305-010	MOTOR, RF-500TB DC-5V (2MA)
R130	87-022-364-080	C-RES,S 82K-1/10W F
R131	87-022-364-080	C-RES,S 82K-1/10W F
R132	87-022-364-080	C-RES,S 82K-1/10W F
R133	87-022-364-080	C-RES,S 82K-1/10W F
R134	87-022-364-080	C-RES,S 82K-1/10W F
R135	87-022-364-080	C-RES,S 82K-1/10W F
SW601	87-036-109-010	PUSH SWITCH
SW602	87-036-109-010	PUSH SWITCH
SW603	87-036-109-010	PUSH SWITCH
X801	87-030-270-080	VIB,XTAL 16.9344MHZ
X901	87-030-264-080	CERA LOCK(MU)12.0MHZ
X902	87-A70-145-080	VIB,CER 33.86MHZ CSTMXWOH3
X903	87-A70-152-080	VIB,CER 45.00MHZ CSAMXZ040
X904	87-A70-084-080	VIB,XTAL 13.5MHZ-50P

T-T C.B

C411	87-018-214-080	CAP TC U 0.1-50F
CON8	87-A60-156-010	CONN,8P H FE
LED411	87-070-288-010	LED,GL380
M401	87-A90-036-010	MOT ASSY,RF-300CA-11
PS401	87-A90-156-010	SNSR,SG-240
Q411	87-A30-031-010	P-TR,PT380F
S401	87-036-109-010	PUSH SWITCH

LED C.B

LED701	87-017-733-080	LED,SEL1250SMTP5 RED
LED702	87-017-733-080	LED,SEL1250SMTP5 RED
LED703	87-017-733-080	LED,SEL1250SMTP5 RED

VIDEO SW C.B<YVOS1NDM,VOS DSM>

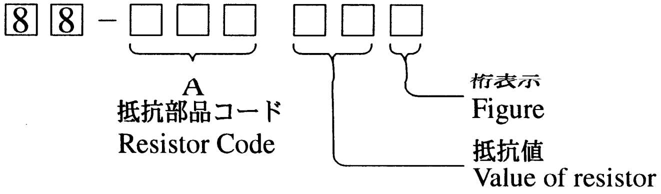
S851	87-A90-238-010	SW,SL 1-1-3 9L

DRIVE C.B

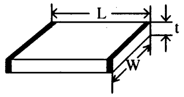
CN3	87-009-349-010	CONN,6P H WHT PH
M20	87-045-358-010	MOT,RF-310TA 43
M21	87-045-356-010	MOT,RF-310TA 30
SW1	87-A90-042-010	SW,LEAF MSW-17310MVPO

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

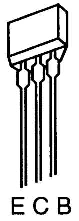
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



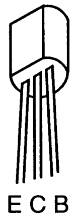
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (	
				外形／Form	L
1/16W	1005	±5%	CJ		1.0
1/16W	1608	±5%	CJ		1.6
1/10W	2125	±5%	CJ		2
1/8W	3216	±5%	CJ		3.2

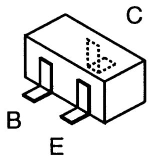
TRANSISTOR ILLUSTRATION



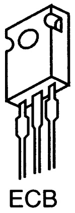
2SA933



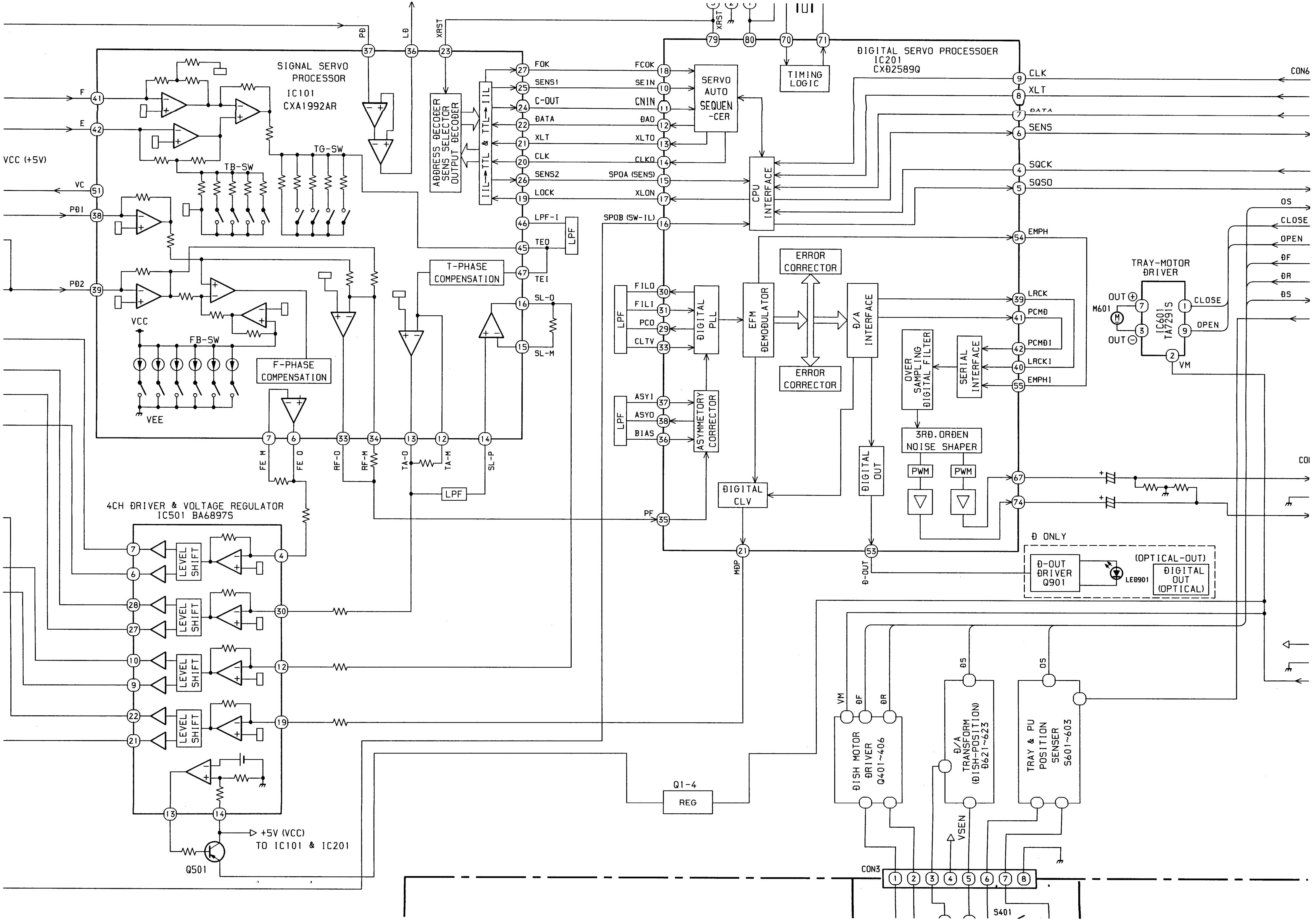
2SA1015
2SC2001
2SD655
2SD2172

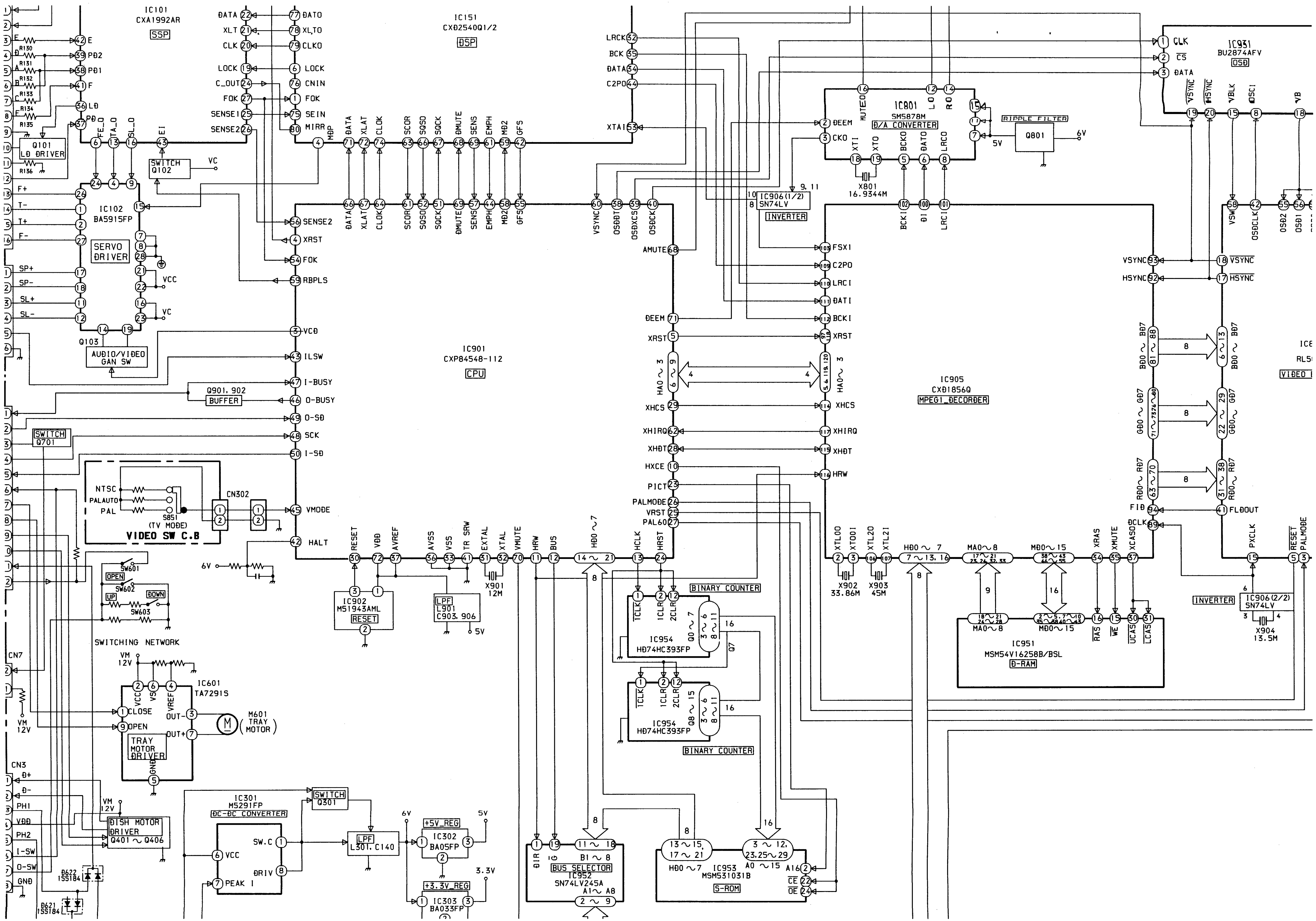


2SA1162
2SC2712
DTA123JK
DTA124XK
DTC123JK
DTC124XK
DTC143TK
DTC144EK

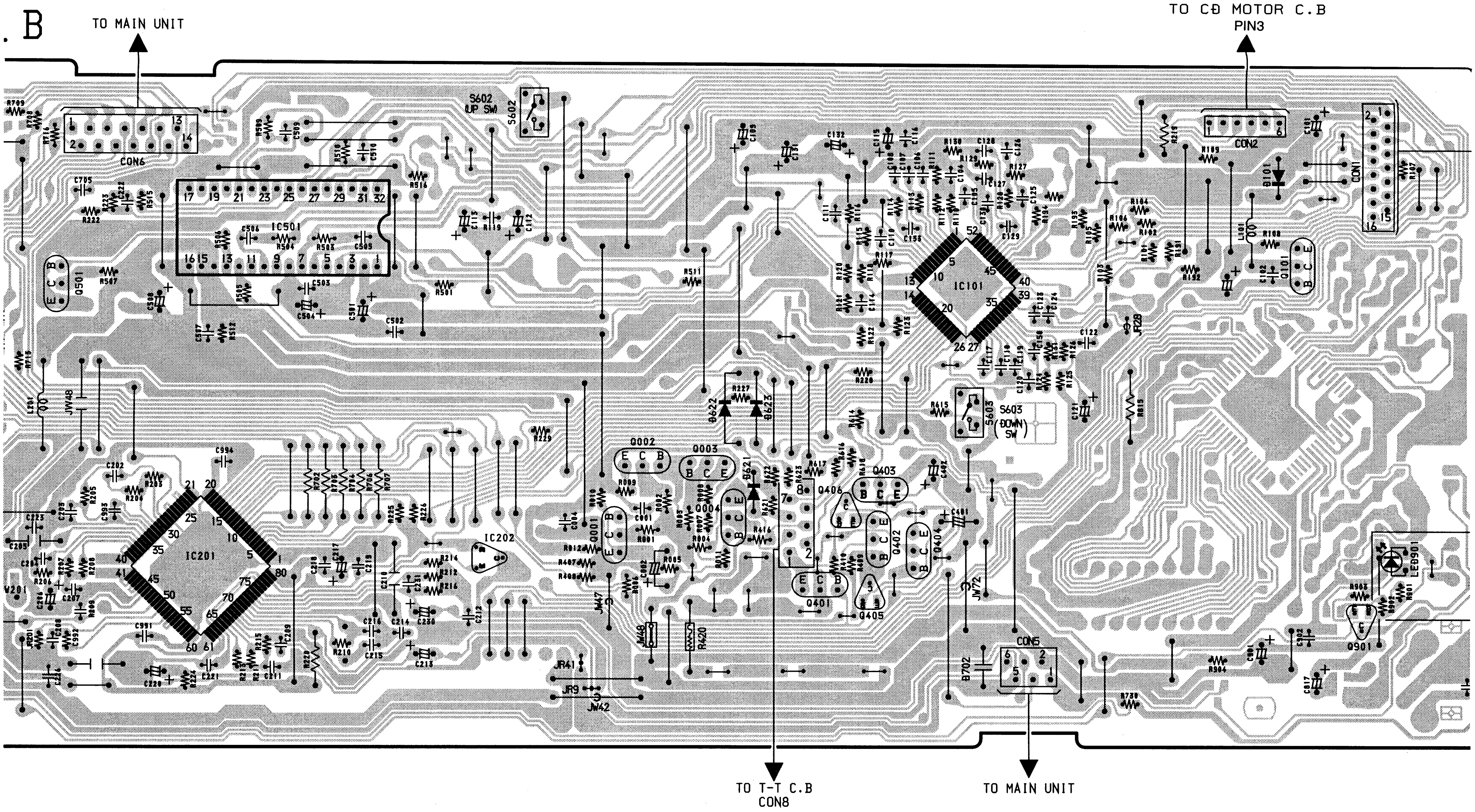


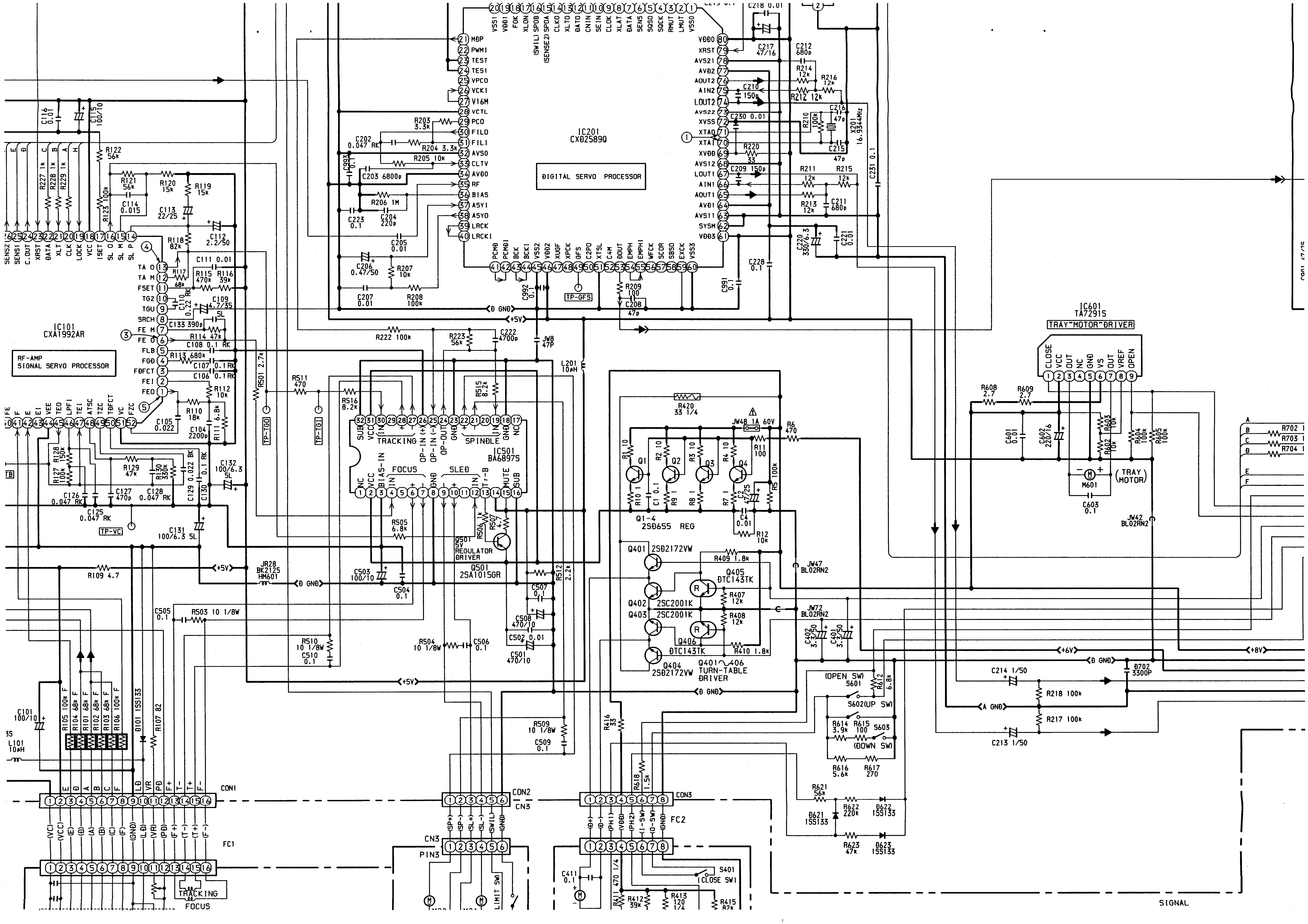
2SA1357

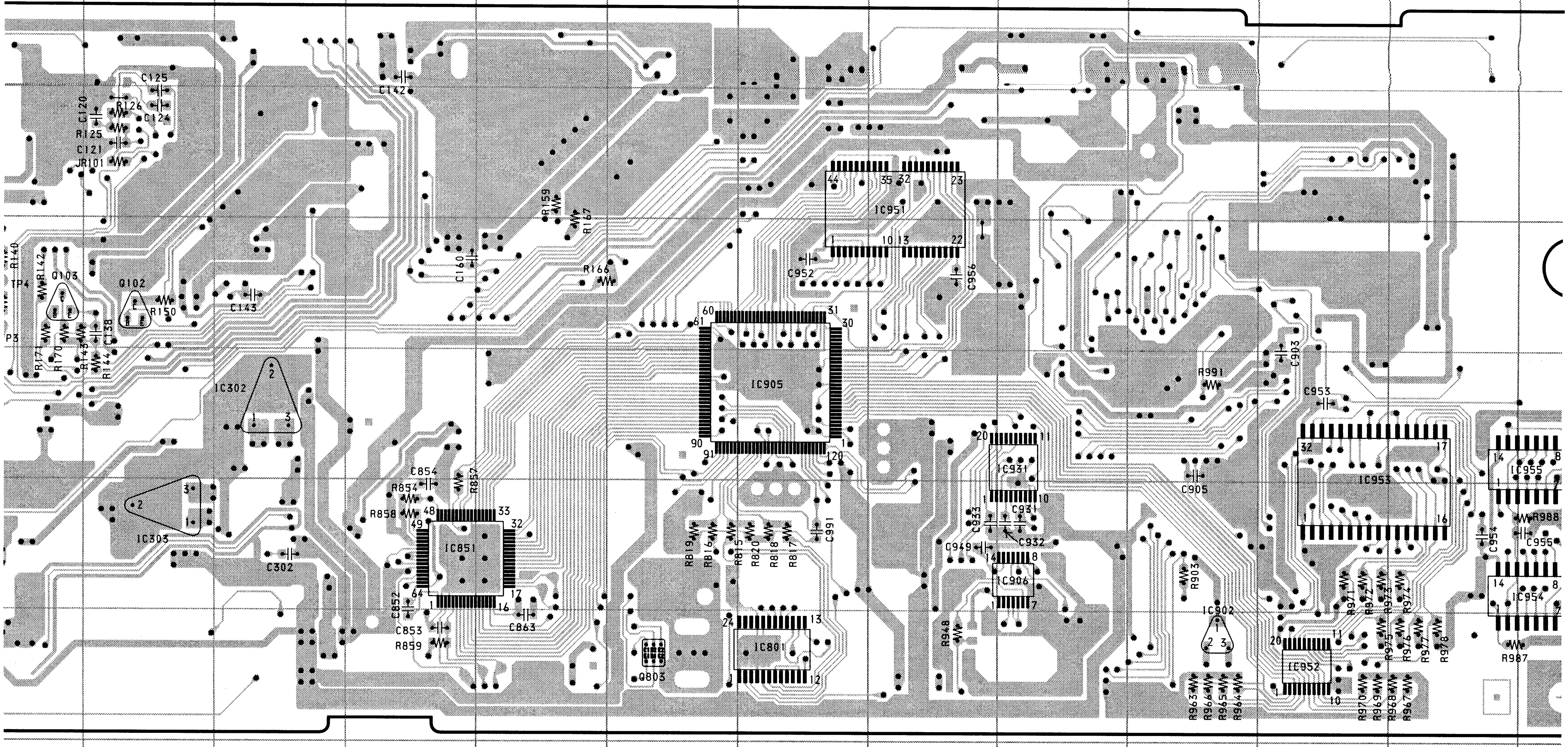

SIGNAL SERVO PROCESSOR
IC101
CXA1992AR
DIGITAL SERVO PROCESSOER
IC201
CXD2589Q
PD
LD
XRST
F
E
VCC (+5V)
VC
PD1
PD2
TB-SW
TG-SW
FB-SW
VCC
VEE
ADDRESS DECODER
SENS SELECTOR
OUTPUT DECODER
IIL→TTL & TTL→IIL
FOK
SENS1
C-OUT
DATA
XLT
CLK
SENS2
LOCK
LPF-I
TEO
TEI
SL-O
SL-M
LPF
T-PHASE COMPENSATION
F-PHASE COMPENSATION
FE M
FE O
RF-O
RF-M
TA-O
TA-M
SL-P
FCOK
SEIN
CNIN
DAO
XLTO
CLKO
SPOA (SENS)
XLON
SPOB (SW-IL)
SERVO AUTO SEQUEN -CER
TIMING LOGIC
CPU INTERFACE
CLK
XLT
DATA
SENS
SQCK
SQSO
CON6
EMPH
LRCK
PCMD
PCMDI
LRCKI
EMPHI
FILO
FILI
PCO
CLTV
DIGITAL PLL
EFM DEMODULATOR
ERROR CORRECTOR
ERROR CORRECTOR
D/A INTERFACE
OVER SAMPLING DIGITAL FILTER
SERIAL INTERFACE
3RD. ORDEN NOISE SHAPER
PWM
PWM
ASYI
ASYO
BIAS
ASYMMETORY CORRECTOR
PF
DIGITAL CLV
DIGITAL OUT
MDP
D-OUT
D ONLY
D-OUT DRIVER Q901
LED901
(OPTICAL-OUT)
DIGITAL OUT (OPTICAL)
TRAY-MOTOR DRIVER
IC601 TA7291S
M601
OUT ⊕
OUT ⊖
CLOSE
OPEN
VM
OS
CLOSE
OPEN
DF
DR
DS
CON
4CH DRIVER & VOLTAGE REGULATOR
IC501 BA6897S
LEVEL SHIFT
+5V (VCC) TO IC101 & IC201
Q501
Q1-4
REG
DISH MOTOR DRIVER Q401~406
VM
DF
DR
DS
D/A TRANSFORM (DISH-POSITION) D621~623
OS
TRAY & PU POSITION SENSER S601~603
VSEN
CON3
S401


IC101
CXA1992AR
SSP
IC151
CXD2540Q1/2
DSP
IC931
BU2874AFV
OSD
IC801
SM5878M
D/A CONVERTER
RIPPLE FILTER
Q801
6V
5V
X801
16.9344M
IC906(1/2)
SN74LV
INVERTER
9, 11
IC102
BA5915FP
SERVO
DRIVER
Q101
LD DRIVER
SWITCH
Q102
VC
VCC
Q103
AUDIO/VIDEO
GAN SW
IC901
CXP84548-112
CPU
Q901, 902
BUFFER
SWITCH
Q701
NTSC
PALAUTO
PAL
S851
(TV MODE)
CN302
VIDEO SW C.B
IC905
CXD1856Q
MPEG1 DECORDER
IC902
M51943AML
RESET
LPF
L901
C903, 906
X901
12M
X902
33.86M
X903
45M
IC906(2/2)
SN74LV
INVERTER
X904
13.5M
IC951
MSM54V16258B/BSL
D-RAM
IC954
HD74HC393FP
BINARY COUNTER
SW601
OPEN
SW602
UP
DOWN
SW603
SWITCHING NETWORK
CN7
VM
12V
IC601
TA7291S
CLOSE
OPEN
OUT-
OUT+
TRAY
MOTOR
DRIVER
M601
TRAY
MOTOR
CN3
PH1
VDD
PH2
I-SW
O-SW
GND
DISH MOTOR
DRIVER
Q401 ~ Q406
D622
1SS184
D621
1SS184
IC301
M5291FP
DC-DC CONVERTER
SW.C
DRIV
PEAK I
SWITCH
Q301
LPF
L301, C140
+5V_REG
IC302
BA05FP
+3.3V_REG
IC303
BA033FP
3.3V
IC952
SN74LV245A
BUS SELECTOR
IC953
MSM531031B
S-ROM
HD0 ~ 7
A0 ~ 15
A16
CE
OE
RESET
PALMODE
PXCLK
VSYNC
HSYNC
FLDOUT
FID
DCLK
XRAS
XMUTE
XCASO
RAS
WE
UCAS
LCAS
MA0 ~ 8
MD0 ~ 15
XTL00
XTO01
XTL20
XTL21
AMUTE
DEEM
XRST
HA0 ~ 3
XHCS
XHIRQ
XHDT
HXCE
PICT
PALMODE
VRST
PAL60
HCLK
HRST
HD0 ~ 7
HRW
BUS
VMUTE
XTAL
EXTAL
TR SRW
VSS
AVSS
AVREF
VDD
FSXI
C2PO
LRCI
DATI
BCKI
HRW
BD0 ~ BD7
GD0 ~ GD7
RD0 ~ RD7
VIDEO
CLK
CS
DATA
VBLK
OSC1
VB
VSW
OSDCLK
OSD2
OSD1
LRCK
BCK
XTAI
VSYNC
OSDDT
OSDXCS
OSDCK
MUTEO
LO
RO
DEEM
CKO
XTI
XTO
BCKO
DATO
LRCO
BCKI
DI
LRCI
SENSE2
XRST
FOK
RBPLS
VCD
ILSW
I-BUSY
O-BUSY
O-SD
SCK
I-SD
VMODE
HALT
DATA
XLAT
CLOK
SCOR
SQSO
SQCK
DMUTE
SENS
EMPH
MD2
GFS
DATA
XLT
CLK
LOCK
C_OUT
FOK
SENSE1
SENSE2
DATO
XLTO
CLKO
CNIN
SEIN
MIRR
MDP
FE_O
TA_O
SL_O
EI
LD
PD
PD1
PD2
R130
R131
R132
R133
R134
R135
R136
F+
T-
T+
F-
SP+
SP-
SL+
SL-
D+
D-

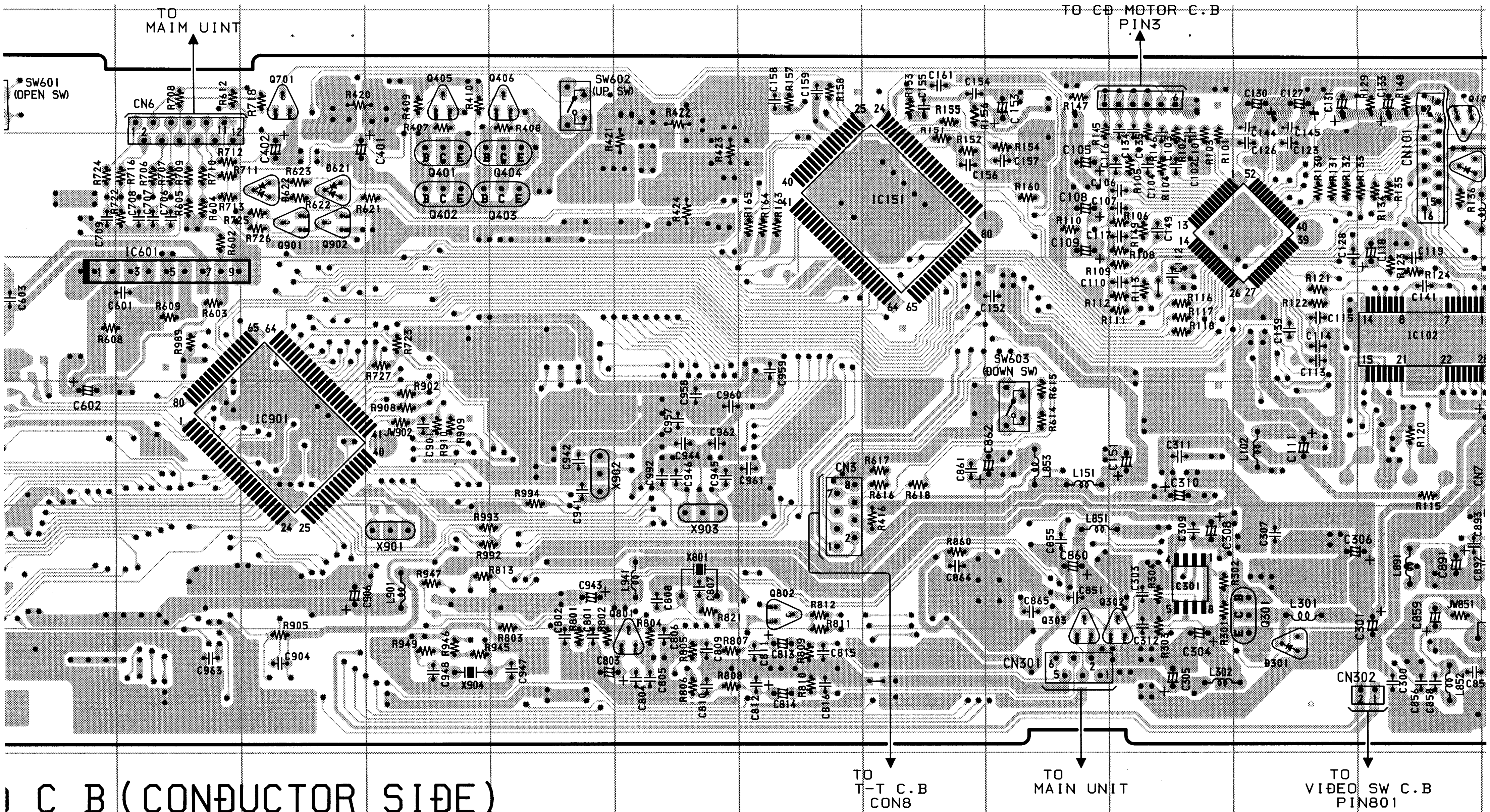
. B


TO MAIN UNIT
TO CD MOTOR C.B
PIN3
CON6
CON2
CON1
IC501
IC101
IC201
IC202
S602
(UP SW)
S603
(DOWN SW)
Q501
Q101
Q001
Q002
Q003
Q004
Q401
Q402
Q403
Q404
Q405
Q406
Q901
D101
D621
D622
D623
LED901
L101
L201
JW48
JW47
JW42
JW72
JR28
JR41
JR9
R420
CON5
TO T-T C.B
CON8
TO MAIN UNIT


IC201
CXD2589Q
DIGITAL SERVO PROCESSOR
IC101
CXA1992AR
RF-AMP
SIGNAL SERVO PROCESSOR
IC501
BA6897S
TRACKING
SPINDLE
FOCUS
SLED
Q501
5V
REGULATOR
DRIVER
Q501
2SA1015GR
Q1-4
2SD655 REG
Q401 2SD2172VW
Q402 2SC2001K
Q403 2SC2001K
Q404 2SD2172VW
Q405 DTC143TK
Q406 DTC143TK
Q401～406
TURN-TABLE
DRIVER
IC601
TA7291S
TRAY MOTOR DRIVER
CLOSE
VCC
OUT
NC
GND
VS
OUT
VREF
OPEN
M601
(TRAY)
(MOTOR)
X201
16.9344MHz
(OPEN SW)
S601
S602(UP SW)
S603
(DOWN SW)
S401
(CLOSE SW)
+5V
D GND
A GND
+6V
+8V
TP-GFS
TP-TGD
TP-TGI
TP-VC
CON1
CON2
CN3
CON3
FC1
FC2
PIN3
TRACKING
FOCUS
LIMIT SW
SIGNAL
JR28
BK2125
HM601
L101
10μH
L201
10μH
JW8
47P
JW47
BL02RN2
JW72
BL02RN2
JW42
BL02RN2
JW48 1A 60V
D101 1SS133
D621 1SS133
D622 1SS133
D623 1SS133
D702
3300P
C214 1/50
C213 1/50
R218 100k
R217 100k
R420
33 1/4
R6 470
R109 4.7
R503 10 1/8W
R510 10 1/8W
R504 10 1/8W
R509 10 1/8W
R512 2.2k
R511 470
R516 8.2k
R515 8.2k
R501 2.7k
R222 100k
R223 56k
C222 4700p
R505 6.8k
C503 100/10
C504 0.1
C505 0.1
C506 0.1
C507 0.1
C508 470/10
C502 0.01
C501 470/10
C509 0.1
C510 0.1
C101 100/10
C131 100/6.3 5L
C132 100/6.3 5L
R105 100k F
R104 68k F
R101 68k F
R102 68k F
R103 68k F
R106 100k F
R107 82
C601 0.01
C602 220/16
C603 0.1
R608 2.7
R609 2.7
R603 10k
R602 10k
R604 100k
R605 100k
R702
R703
R704
R612 6.8k
R614 3.9k
R615 100
R616 5.6k
R617 270
R621 56k
R622 220k
R623 47k
R618 1.5k
R416 33
C411 0.1
R41 470 1/4
R412 39k
R413 120 1/4
R415 82k
C402 3.3/50
C401 3.3/50
R409 1.8k
R407 12k
R408 12k
R410 1.8k
R11 100
R5 100k
R12 10k
C4 0.01
C2 47/25
C217 47/16
C218 0.01
C212 680p
R214 12k
R216 12k
C210 150p
R212 12k
C216 47p
R210 100k
C230 0.01
C215 47p
R220 33
C231 0.1
C209 150p
R211 12k
R215 12k
R213 12k
C211 680p
C220 330/6.3
C221 0.01
C228 0.1
C991 0.1
C992 0.1
R209 100
C208 47p
R203 3.3k
C202 0.047 RK
R204 3.3k
R205 10k
C203 6800p
R206 1M
C204 220p
C223 0.1
C205 0.01
C206 0.47/50
R207 10k
C207 0.01
R208 100k
C116 0.01
C115 100/10
R122 56k
R227 1k
R228 1k
R229 1k
R123 100k
R121 56k
R120 15k
R119 15k
C114 0.015
C113 22/25
C112 2.2/50
R118 82k
C111 0.01
R117 68k
R115 470k
R116 39k
C110 0.22 RK
C109 4.7/35
C133 390p
R114 47k
C108 0.1 RK
R113 680k
C107 0.1RK
C106 0.1RK
R112 10k
R110 18k
C105 0.022
C104 2200p
R111 6.8k
R128 150k
R127 100k
R129 47k
R130 330k
C129 0.022 BK
C130 0.1 RK
C126 0.047 RK
C127 470p
C128 0.047 RK
C125 0.047 RK

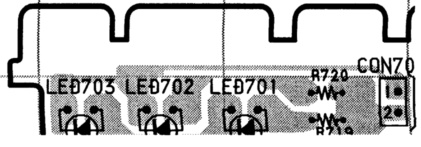

C125
C120
R126
C124
R125
C121
JR101
C142
R159
R167
C160
R166
R140
R142
TP4
Q103
Q102
R150
C143
C138
P3
R171
R170
R145
R144
IC302
IC303
C302
IC951
44
35
32
23
1
10
13
22
C952
C956
IC905
60
61
31
30
90
91
1
120
C854
R854
R857
R858
48
33
49
32
IC851
64
17
1
16
C852
C853
R859
C863
R819
R816
R815
R820
R818
R817
C991
IC801
24
13
12
Q803
IC931
20
11
10
C931
C933
C932
C949
14
8
IC906
7
R948
C903
R991
C953
C905
R903
IC902
R963
R966
R965
R964
IC953
32
17
16
IC952
20
11
10
R971
R972
R973
R974
R975
R976
R977
R978
R970
R969
R968
R967
IC955
14
8
R988
C954
C955
IC954
R987

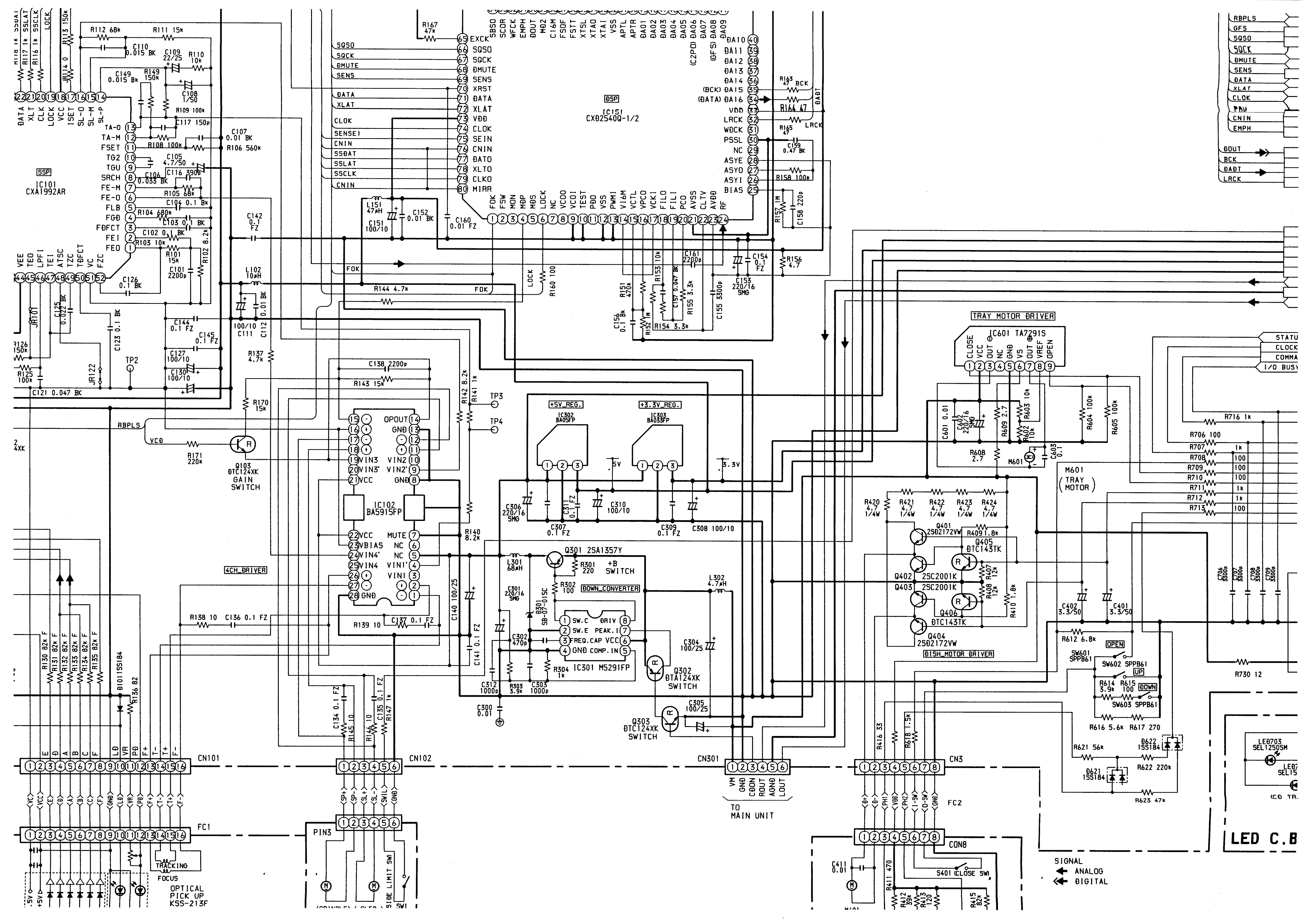
C. B (COMPONENT SIDE)

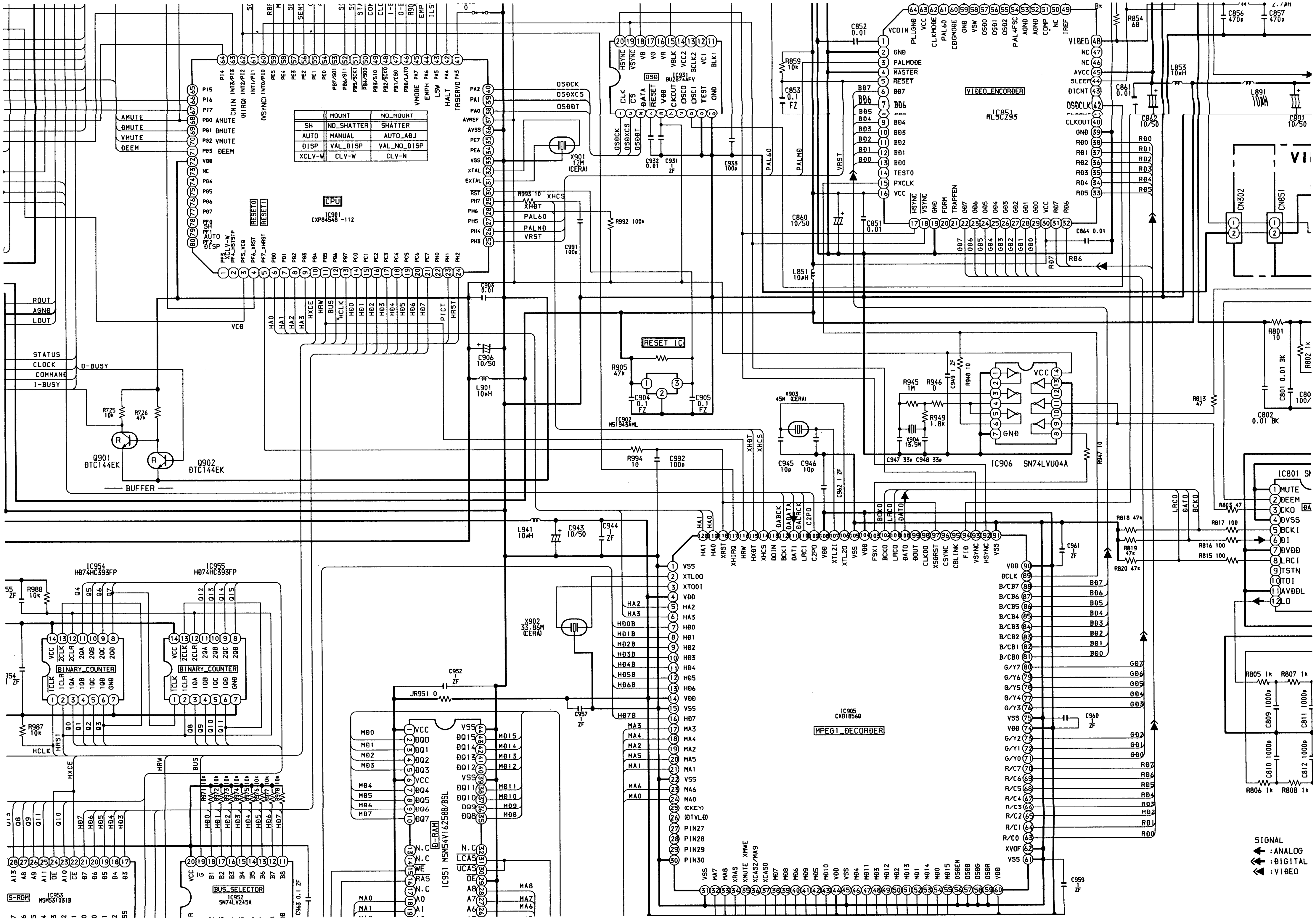

TO MAIM UINT
TO CD MOTOR C.B PIN3
SW601 (OPEN SW)
SW602 (UP SW)
SW603 (DOWN SW)
CN6
CN3
CN101
CN301
CN302
CN7
IC601
IC901
IC151
IC102
C301
Q701
Q405
Q406
Q401
Q404
Q402
Q403
Q901
Q902
Q801
Q802
Q302
Q303
Q301
X901
X902
X903
X904
X801
L151
L301
L302
L851
TO T-T C.B CON8
TO MAIN UNIT
TO VIDEO SW C.B PIN801

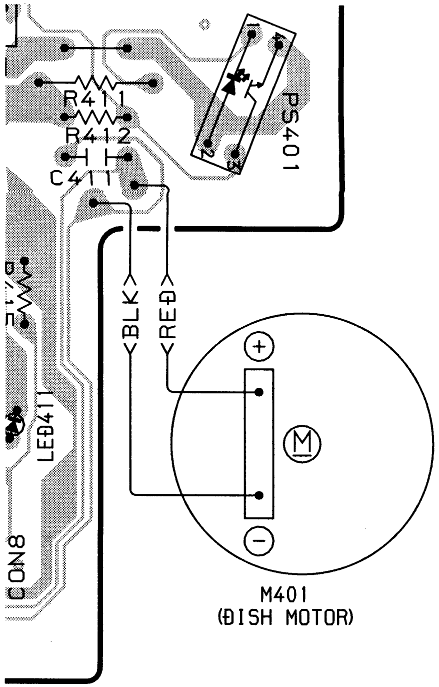
C.B (CONDUCTOR SIDE)

LED C.B

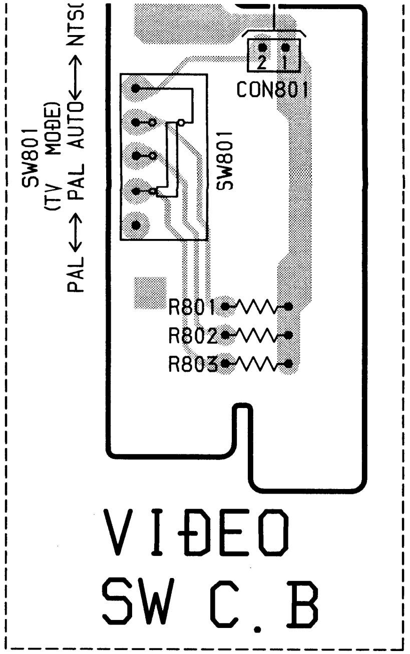

LED703
LED702
LED701
R720
R719
CON70


SSP
IC101
CXA1992AR
DSP
IC151
CXD2540Q-1/2
4CH_DRIVER
IC102
BA5915FP
+5V_REG.
IC302
BA05FP
+3.3V_REG.
IC303
BA033FP
5V
3.3V
DOWN_CONVERTER
IC301 M5291FP
SW.C
SW.E
FREQ.CAP
GND
DRIV
PEAK.I
VCC
COMP.IN
Q301 2SA1357Y
+B SWITCH
Q302 DTA124XK SWITCH
Q303 DTC124XK SWITCH
Q103 DTC124XK GAIN SWITCH
D301 SB-07-015C
TRAY MOTOR DRIVER
IC601 TA7291S
CLOSE
VCC
OUT
OUT
NC
GND
VS
VREF
OPEN
M601 (TRAY MOTOR)
DISH_MOTOR DRIVER
Q401 2SD2172VW
Q402 2SC2001K
Q403 2SC2001K
Q404 2SD2172VW
Q405 DTC143TK
Q406 DTC143TK
SW601 SPPB61
SW602 SPPB61
SW603 SPPB61
OPEN
UP
DOWN
D621 1SS184
D622 1SS184
D101 1SS184
CN101
CN102
CN301
CN3
FC1
FC2
CON8
PIN3
TO MAIN UNIT
VM
GND
CDON
ROUT
AGND
LOUT
OPTICAL PICK UP KSS-213F
TRACKING
FOCUS
SPINDLE
SLED
SIDE LIMIT SW
SW1
S401 (CLOSE SW)
LED C.B
LED703 SEL1250SM
SIGNAL
ANALOG
DIGITAL
TP2
TP3
TP4
RBPLS
VCD
FOK
LOCK
SQSO
SQCK
DMUTE
SENS
DATA
XLAT
CLOK
SENSE1
CNIN
SSDAT
SSLAT
SSCLK
XRST
VDD
SEIN
XLTO
CLKO
MIRR
EXCK
BCK
LRCK
DOUT
DADT
GFS
PDV
EMPH
STATUS
CLOCK
COMMAND
I/O BUS

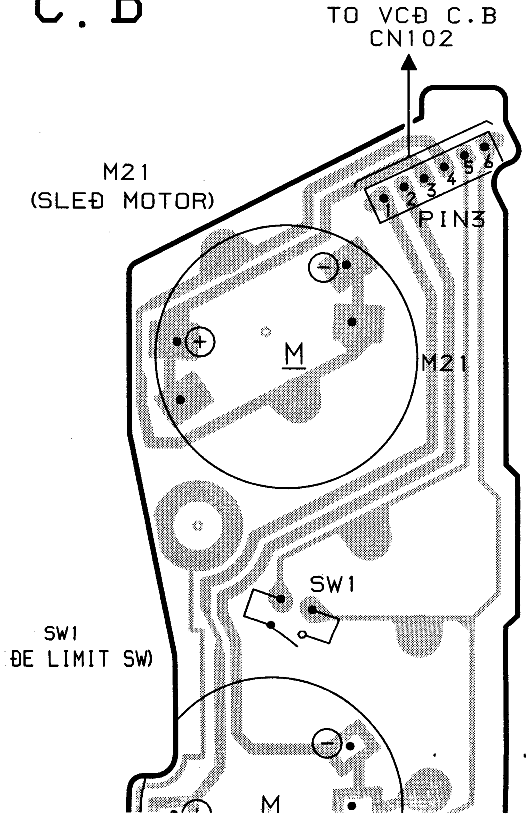

CPU
IC901
CXP84548 -112
RESET0
RESET1
SH
AUTO
DISP
XCLV-W
MOUNT
NO_SHATTER
MANUAL
VAL_DISP
CLV-W
NO_MOUNT
SHATTER
AUTO_ADJ
VAL_NO_DISP
CLV-N
AMUTE
DMUTE
VMUTE
DEEM
OSDCK
OSDXCS
OSDDT
X901
12M
(CERA)
R993 10
XHCS
XHDT
PAL60
PALMD
VRST
R992 100k
C991
100p
C903
0.01
C906
10/50
L901
10μH
ROUT
AGND
LOUT
STATUS
CLOCK
COMMAND
I-BUSY
O-BUSY
R725
10k
R726
47k
Q901
DTC144EK
Q902
DTC144EK
BUFFER
VCO
OSD
IC931
BU2874AFV
C932
0.01
C931
1
ZF
C933
100p
RESET IC
R905
47k
C904
0.1
FZ
C905
0.1
FZ
IC902
M51943AML
X903
45M (CERA)
C945
10p
C946
10p
C962 1 ZF
R994
10
C992
100p
L941
10μH
C943
10/50
C944
1
ZF
X902
33.86M
(CERA)
C952
1
ZF
JR951 0
C957
1
ZF
IC905
CXD1856Q
MPEG1_DECORDER
C960
1
ZF
C961
1
ZF
C959
1
ZF
VIDEO_ENCORDER
IC851
RL5C295
C852
0.01
R859
10k
C853
0.1
FZ
C860
10/50
C851
0.01
L851
10μH
C864 0.01
C856
470p
C857
470p
R854
68
L853
10μH
C861
0.01
L891
10μH
C862
10/50
C891
10/50
CN302
CN851
IC906 SN74LVU04A
R945
1M
R946
0
C949 1 ZF
R948 10
R949
1.8k
X904
13.5M
C947 33p
C948 33p
R947 10
R801
10
R802
C801 0.01 BK
C802
0.01 BK
R813
47
IC801
MUTE
DEEM
CKO
DVSS
BCKI
DI
DVDD
LRCI
TSTN
TOI
AVDDL
LO
R803 47
R817 100
R816 100
R815 100
R818 47k
R819 47k
R820 47k
LRCO
DATO
BCKO
R805 1k
R807 1k
R806 1k
R808 1k
C809 1000p
C811 1000p
C810 1000p
C812 1000p
IC954
HD74HC393FP
IC955
HD74HC393FP
BINARY_COUNTER
R988
10k
R987
10k
HCLK
HRST
HXCE
HRW
BUS
IC953
MSM531031B
S-ROM
IC952
SN74LV245A
BUS_SELECTOR
C963 0.1 ZF
D-RAM
IC951 MSM54V16258B/BSL
SIGNAL
:ANALOG
:DIGITAL
:VIDEO


R411
R412
C411
PS401
BLK
RED
+
M
−
LED411
CON8
M401
(DISH MOTOR)

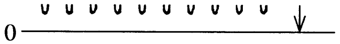
C. B


SW801
(TV MODE)
PAL ↔ PAL AUTO ↔ NTSC
CON801
2 1
SW801
R801
R802
R803

VIDEO SW C. B

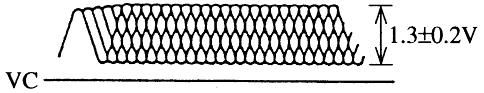

TO VCD C.B
CN102
M21
(SLED MOTOR)
1 2 3 4 5 6
PIN3
−
+
M
M21
SW1
SW1
DE LIMIT SW)
−
M

CD MOTOR C. B



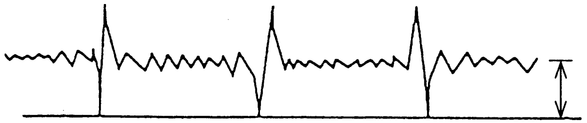
② RF

VOLT/DIV: 500mV
TIME/DIV: 0.5µS

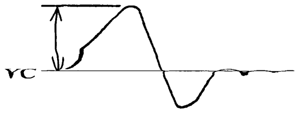


③ FOCUS

VOLT/DIV: 200mV
TIME/DIV: 2mS

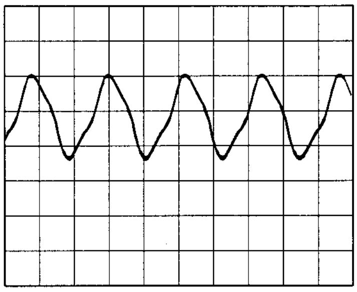


⑤ FOCUS SEARCH



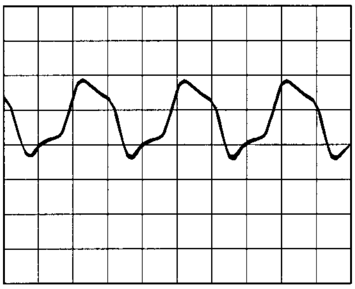
⑥ IC905 Pin (106) (XTL20)

VOLT/DIV: 2V
TIME/DIV: 10nS



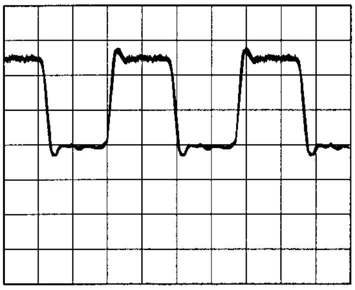
⑦ IC905 Pin ② (XTL00)

VOLT/DIV: 2V
TIME/DIV: 10nS



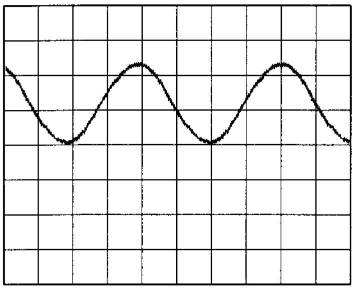
⑧ IC906 Pin ⑥

VOLT/DIV: 2V
TIME/DIV: 20nS



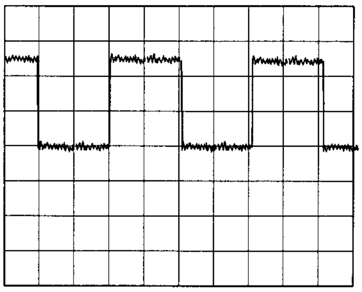
⑨ IC901 Pin ㉛ (EXTAL)

VOLT/DIV: 2V
TIME/DIV: 20nS



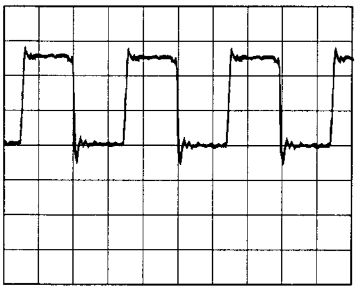
⑩ IC851 Pin ㊶ (FLDOUT)

VOLT/DIV: 2V
TIME/DIV: 10mS



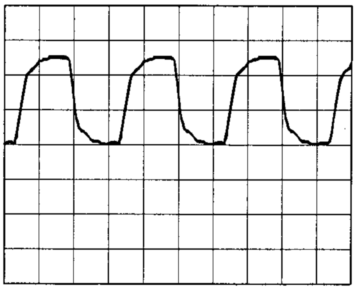
⑪ IC851 Pin ㊷ (OSDCLK)

VOLT/DIV: 2V
TIME/DIV: 50nS



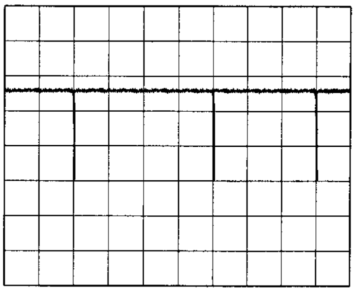
⑫ IC801 Pin ③ (CKO)

VOLT/DIV: 2V
TIME/DIV: 20nS

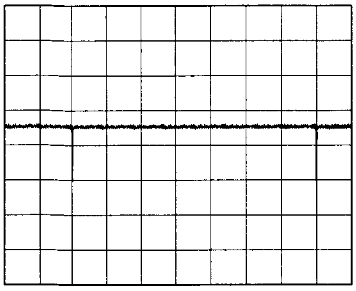


⑬ IC952 Pin ⑪ (B8)

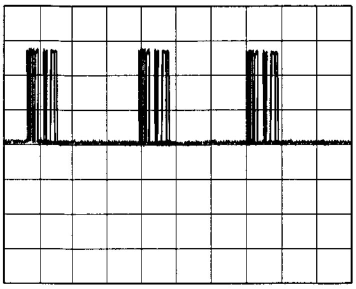
VOLT/DIV: 2V
TIME/DIV: 1mS



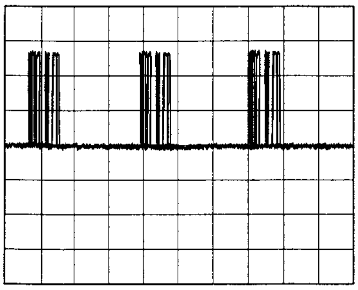
⑭ IC952 Pin ⑨ (A8)
VOLT/DIV: 2V
TIME/DIV: 1mS



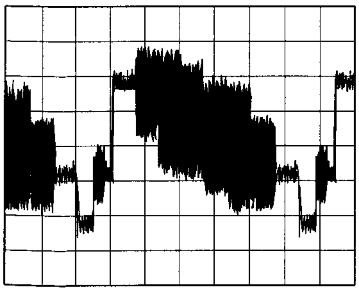
⑮ IC931 Pin ⑮ (VBLK)
VOLT/DIV: 2V
TIME/DIV: 20μS



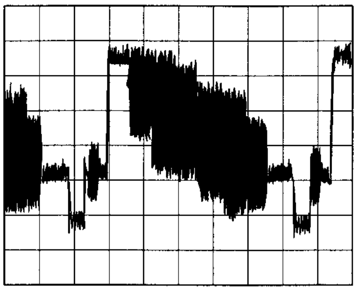
⑯ IC931 Pin ⑱ (VB)
VOLT/DIV: 2V
TIME/DIV: 20μS



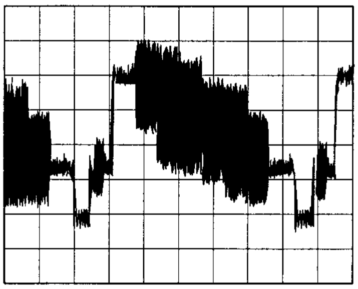
⑰ IC851 Pin (61) (PAL60)
NTSC DISC NTSC
VOLT/DIV: 200mV
TIME/DIV: 10μS



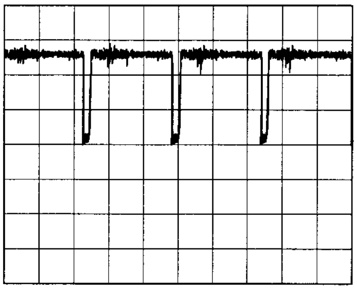
IC851 Pin (61) (PAL60)
PAL DISC PAL
VOLT/DIV: 200mV
TIME/DIV: 10μS



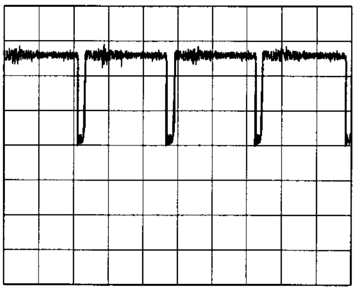
IC851 Pin (61) (PAL60)
NTSC DISC PAL AUTO
VOLT/DIV: 200mV
TIME/DIV: 10μS



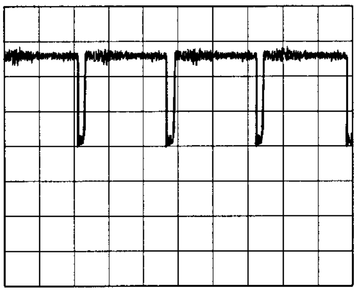
⑱ IC851 Pin ⑰ ($\overline{\text{H SYNC}}$)
NTSC
VOLT/DIV: 2V
TIME/DIV: 50μS



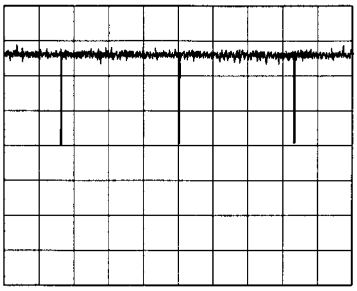
IC851 Pin ⑰ ($\overline{\text{H SYNC}}$)
PAL AUTO
VOLT/DIV: 2V
TIME/DIV: 50μS



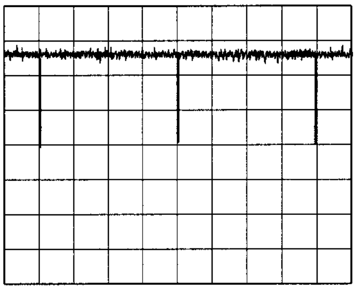
IC851 Pin ⑰ ($\overline{\text{H SYNC}}$) VOLT/DIV: 2V
PAL TIME/DIV: 50μS



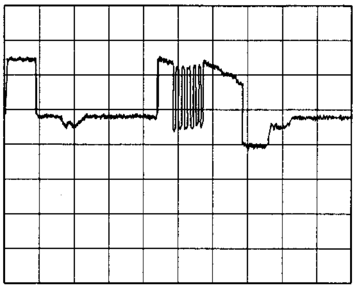
IC851 Pin ⑱ ($\overline{\text{V SYNC}}$) VOLT/DIV: 2V
PAL TIME/DIV: 10mS



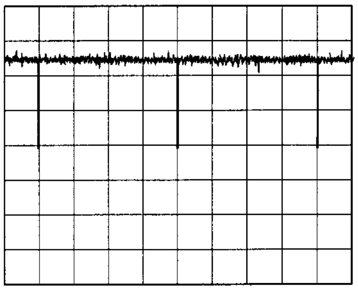
⑲ IC851 Pin ⑱ ($\overline{\text{V SYNC}}$) VOLT/DIV: 2V
NTSC TIME/DIV: 10mS



⑳ CN6 Pin ⑪ (O-DISH, SENS) VOLT/DIV: 2V
TIME/DIV: 200mS



IC851 Pin ⑱ ($\overline{\text{V SYNC}}$) VOLT/DIV: 2V
PAL AUTO TIME/DIV: 10mS



IC DESCRIPTION

IC, CXD2589Q

Pin No.	Pin Name	I/O	Description
1, 20, 45, 60	VSS	—	GND.
2	LMUT	O	Lch-“0” detect flag.
3	RMUT	O	Rch-“0” detect flag.
4	SQCK	I	Clock input for SQSO read out.
5	SQSO	O	SubQ 80 bit serial output.
6	SENS	O	SENS signal output to CPU.
7	DATA	I	Serial data input from CPU.
8	XLAT	I	Latch input from CPU, Latch serial data at fall down.
9	CLOK	I	Clock input to serial data transfer from CPU.
10	SEIN	I	SENS input from SSP.
11	CNIN	I	Numbers of track jump are counted and input.
12	DATO	O	Serial data output to SSP.
13	XLTO	O	Serial-data latch output to SSP. Latch at fall down.
14	CLKO	O	Clock output for serial data transfer to SSP.
15	SPOA	I	Microcomputer expansion interface. (Input A)
16	SPOB	I	Microcomputer expansion interface. (Input B)
17	XLON	O	Microcomputer expansion interface. (Output)
18	FOK	I	Focus OK input terminal. Used for SENS output and servo-auto sequencer.
19, 46, 61, 80	VDD	—	Power supply. (+5V)
21	MDP	O	Servo control for spindle motor.
22	PWMI	I	External control input for spindle motor.
23	TEST	I	TEST terminal. (Connected to GND)
24	TESI	I	TEST terminal. (Connected to GND)
25	VPCO	O	Charge pump output for extensive EFM PLL.
26	VCKI	I	VCO2 oscillator input for extensive EFM PLL.
27	V16M	O	VCO2 oscillator output for extensive EFM PLL.
28	VCTL	I	VCO2 control voltage input for extensive EFM PLL.
29	PCO	O	Charge pump output for master PLL.
30	FILO	O	Filter (slave = digital PLL) output for master PLL.
31	FILI	I	Filter input for master PLL.
32	AVSS	—	Analog GND.
33	CLTV	I	VCO control voltage input for master.
34	AVDD	—	Analog power. (+5V)
35	RF	I	EFM signal input.
36	BIAS	I	Constant current input to asymmetry circuit.
37	ASYI	I	Comparison voltage input to asymmetry circuit.
38	ASYO	O	EFM full-swing output. (L=VSS, H=VDD)
39	LRCK	O	D/A interface, LR clock output f=FS.
40	LRCKI	I	LR clock input.
41	PCMD	O	D/A interface, serial data output. (2’s COMP, MSB first)
42	PCMDI	I	D/A interface, serial data input. (2’s COMP, MSB first)

Pin No.	Pin Name	I/O	Description
43	BCK	O	D/A interface bit clock output.
44	BCKI	I	D/A interface bit clock input.
47	XUGF	O	XUGF output, MNT1 or RPCK output by switching command.
48	XPCK	O	XPLCK output, MNT0 output by switching command.
49	GFS	O	GFS output, MNT3 or XRAOF output by switching command.
50	C2PO	O	C2PO output, GTOP output by switching command.
51	XTSL	I	X'tal select input terminal, X'tal: 16.9344MHz = "L" 33.8688MHz = "H".
52	C4M	O	4.2336MHz output, Output 1/4 divided frequency of VCKI at CAV-W mode.
53	DOUT	O	Digital Out connector output signal.
54	EMPH	O	"H" when the playback disc has emphasis. "L" when it does not.
55	EMPHI	I	De-emphasis ON/OFF, "H" when ON, "L" when OFF.
56	WFCK	O	WFCK output.
57	SCOR	O	H output when the subcode sync S0 or S1 is detected.
58	SESO	O	Serial output for SubP-W.
59	EXCK	I	SBSO read out clock input.
62	SYSM	I	Mute input terminal, Active the "H" setting.
63	AVSS	—	Analogue GND.
64	AVDD	—	Analogue power supply. (+5V)
65	AOUT1	O	Lch/analogue output terminal.
66	AINI	I	Lch/OP AMP input terminal.
67	LOUT1	O	Lch/LINE output terminal.
68	AVSS	—	Analogue GND.
69	XVDD	—	Power supply for master clock.
70	XTAI	I	Input terminal for crystal oscillator circuit. Input external master clock from this terminal.
71	XTAO	O	Output terminal for crystal oscillator circuit.
72	XVSS	—	GND terminal for master clock.
73	AVSS	—	Analogue GND.
74	LOUT2	O	Rch/LINE output terminal.
75	AIN2	I	Rch/OP AMP input terminal.
76	AOUT2	O	Rch/analogue output terminal.
77	AVDD	—	Analogue power supply. (+5V)
78	AVSS	—	Analogue GND.
79	XRST	I	Reset system at "L" setting.

Note)

- PCMD is the two's complement output with MSB first.
- GTOP monitors the protection status of the Frame Sync. (H: Sync protection window opened).
- XUGF is the Frame Sync negative pulse which is obtained from the EFM signal. This is the signal before the sync protection.
- XPLCK is the inverted signal of the EFM PLL clock. The PLL works so that the fall-down edge and the changed point of the EFM signal agree.
- GFS is the signal that goes "H" when the Frame Sync and the internally inserted timing agree.
- RFCK is the signal having 136 micro-seconds (during normal speed) that is generated to have the same accuracy as X'tal.
- C2PO is the signal indicating the error status of the data.
- XRAOF is the signal that is generated when the 16k RAM goes outside the jitter margin ±4F.

IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC	—	Not used.
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS	—	GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS	—	Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD	—	Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC	—	Not used.
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD	—	Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS	—	GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD	—	Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136µ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. ("H" or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X'tal system VDD terminal.
18	XTI	I	X'tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X'tal oscillator terminal.
20	XVSS	—	X'tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

IC, CXD1856R

Pin No.	Pin Name	I/O	Description
1	VSS	—	GND.
2, 3	XTLOO, XTLOI	O/I	Video decoder master clock. Input the clock signal to the XTLOI or connect an external oscillator between XTLOI and XTL OO. The recommend frequency is 27 MHz, 28.3636 MHz (NTSC 8fs) or 65.4686 MHz (PAL 8fs).
4	VDD	—	Power supply.
5, 6, 119, 120	HA0-HA3	I	This is the register address input terminal when the host interface is in the parallel mode. HA0 is the serial data input terminal in the serial mode. HA1 to HA3 must be fixed to the "L" level during the serial mode.
7-13, 16	HD0-HD7	I/O	This is the register data input/output terminal when the host interface is in the parallel mode. HA0 is the serial data output terminal in the serial mode. HD1 to HD7 must be fixed the "L" level during the serial mode.
14	VDD	—	Power supply.
15	VSS	—	GND.
17-21, 23, 24, 32, 33	MA0-MA8	O	DRAM address signal output terminal. The DRAM address signal output terminal must be connected to the DRAM address terminal in the way that the terminal numbers match each other.
22	VSS	—	GND.
25	CKEY	O	Chroma key signal terminal. This terminal goes to "L" while outputting the color that is specified as the key color. Set this terminal to OPEN when it is not used.
26	DTVLD	O	Video data identification signal terminal. This terminal goes to "H" outputting the picture of the frame memory. This terminal goes to "L" while outputting the border color or during blanking. Set this terminal to OPEN when it is not used.
27-29	PIN27-PIN29	—	Not used.
30	PIN30	—	GND.
31	VSS	—	GND.
34	XRAS	O	Low address strobe signal output terminal. Connect this terminal to the DRAM $\overline{\text{RAS}}$ signal terminal.
35	XMWE	O	DRAM write enable signal output terminal. Connect this terminal to the DRAM $\overline{\text{WE}}$ signal terminal.
36	XCAS2/MA9	O	Use this terminal when 8-Mbit DRAM is connected. Connect this terminal to the DRAM $\overline{\text{CAS}}$ signal terminal of the upper words (256K to 512K-1) side when the DRAM system consists of the two DRAMs × 256 × 16 bits (upper bite and lower bite are common). Connect this terminal to the MA9 terminal (common to the two DRAMs) when DRAM system consists of the two DRAMs × 512 Kw × 8 bits.
37	XCAS0	O	This is the DRAM column address strobe signal output. Connect this terminal to the DRAM $\overline{\text{CAS}}$ signal terminal of the lower words (0 to 256 K-1) side when DRAM system consists of the two DRAMs × 256 Kw × 16 bits (upper bite and lower bite are common). Connect this terminal commonly to the DRAM $\overline{\text{CAS}}$ signal terminal in all connections other than the above described connection.
38-43, 46-55	MD0-MD15	I/O	DRAM data signal input/output terminal. These terminals must be connected to the DRAM data terminals in the way that the terminal numbers match each other.
44	VDD	—	Power supply.

Pin No.	Pin Name	I/O	Description
45	VSS	—	GND.
56	OSDEN	I	OSD enable signal terminal. Polarity to enable the OSD can be changed by setting the register.
57-59	OSDB, OSDG, OSDR	I	OSD data input terminal. The color that is registered in the color table and specified by the three inputs (3 bits), is output when the signal that is input to the OSDEN terminal is in the enable state.
60	VDD	—	Power supply.
61	VSS	—	GND.
62	XVOE	I	Video output enable signal terminal. When this terminal is set to "L", the picture data output and the DCLK output are enabled. When this terminal is set to "H", they are disabled (high impedance). In order to make the output enable, the setting of the output control register must also be set to the enable state.
63-70	R/Cr0-R/Cr7	O	Picture data output terminal. Output data formats (RGB, YCbCr) and correspondence between terminals and output data can be changed by the register setting.
71-73, 76-80	G/Y0-G/Y2, G/Y3-G/Y7	O	
81-88	B/Cb0-B/Cb7	O	
74	VDD	—	Power supply.
75	VSS	—	GND.
89	DCLK	I/O	Dot clock (DCLK) signal terminal. The DCLK frequency is normally 13.5 MHz. The DCLK signal can be input from this terminal or can be output from this terminal after dividing-frequency of the clock input.
90	VDD	—	Power supply.
91	VSS	—	GND.
92	HSYNC	I/O	Horizontal sync signal terminal. When the internal sync generator is used, the horizontal sync signal that is obtained by frequency-dividing the dot clock (DCLK) is output. When the internal sync generator is not used, the external horizontal sync is input to this terminal.
93	VSYNC	I/O	Vertical sync signal terminal. When the internal sync generator is used, the vertical sync signal that is obtained by frequency-dividing the dot clock (DCLK) is output. When the internal sync generator is not used, the external vertical sync is input to this terminal.
94	FID/FHREF	I/O	This terminal is used for the two signals of the field identification signal (FID) and the horizontal sync phase reference signal (FHREF). Use of this terminal is determined by the register setting. When set to FID, this terminal is used as output terminal when the internal sync generator is used, and is used as input terminal when the internal sync generator is not used. "H" correspond to the odd fields. When this terminal is set to FHREF, the horizontal sync phase reference signal that is obtained by frequency-dividing XTL0, is output. When XTL0 is 8 fsc, the signal that corresponds to H. SYNC cycle is generated that can be used for phase comparison with the H. SYNC signal.

Pin No.	Pin Name	I/O	Description
95	CBLNK/FSC	I/O	This terminal is used for the two signals of the composite blanking signal (CBLNK) and the fsc signal. Use of this terminal is determined by the register setting. When set to CBLNK, this terminal is used as output terminal when the internal sync generator is used, and is used as input terminal when the internal sync generator is not used. When set to fsc, the signal that is obtained by dividing-frequency of XTL0 is output. The dividing ratio of either 1/8 or 1/16 can be selected.
96	CSYNC	O	Composite sync signal terminal. The composite sync signal is generated by frequency-dividing the DCLK signal. This terminal cannot accept any inputs.
97	XSGRST	I	Sync signal generator reset signal input. The internal generator is initialized by setting this terminal to "L".
98	CLK0O	O	The clock signal that is obtained by frequency-dividing XTL0 is output from this terminal. Dividing ratio of either 1, 1/2, 1/4 or 1/8 can be selected.
99	DOUT	O	Audio digital output terminal.
100	DATO	O	Audio serial data output terminal to DAC.
101	LRCO	O	L/R clock output terminal to DAC.
102	BCKO	O	Bit clock output terminal to DAC.
103	FSXI	I	Clock input for audio interface. Input the 256fs (11.2896 MHz), 384fs (16.9344 MHz), 512fs (22.5792 MHz) or (33.8688 MHz) etc., to this terminal.
104	VDD	—	Power supply.
105	VSS	—	GND.
106, 107	XTL2O, XTL2I	O/I	Master clock terminal of the CD-ROM decoder and audio decoder. Either input the clock signal to XTL2I or connect an external oscillator between XTL2I and XTL2O. Recommended frequency is 45 MHz. This clock serves for internal circuit only, and is not synchronized with the input and output signals.
108	VDD	—	Power supply.
109	C2PO	I	This is the terminal to input the C2 pointer from CD-DSP. It indicates that the DATI input has an error.
110	LRCI	I	This is the terminal to input the LR clock from CD-DSP. It indicates if it is L channel or R channel.
111	DATI	I	This is the terminal to input the serial data from CD-DSP.
112	BCKI	I	This is the terminal to input the bit clock from CD-DSP. This is the clock to strobe the DATI input.
113	DOIN	I	This is the terminal to input the digital data from CD-DSP.
114	XHCS	I	This is the terminal of the chip select input signal during register access.
115	XHDT	I/O	This is the terminal to output the wait signal during register access. This terminal outputs the unique wait signal that is generated or not generated by the register, during DRAM access when the host interface is in the parallel mode. The pull up resistor is required since this terminal operates in the open drain configuration. Use the pull up resistor in the serial mode operation too.
116	HRW	I	This terminal receives the $R/\overline{W}$ input signal when the host interface is in the parallel mode. This terminal receives the serial clock input during the serial mode.

Pin No.	Pin Name	I/O	Description
117	XHIRQ	O	This is the interrupt request signal output terminal. The pull up resistor is required since this terminal operates in the open drain configuration.
118	XRST	I	This is the hardware reset signal input terminal. All operations are initialized when this terminal is set to “L”.

IC, RL5C293

Pin No.	Pin Name	I/O	Description
1	VCOIN	I/O	Charge pump output/VCO input terminal (Connect an external capacitor for loop filter, to this terminal).
2, 19, 39, 59	GND	—	Digital ground.
3	PALMODE	I	Video mode selection control terminal (LVTTL level). NTSC mode when PALMODE = 0. PAL mode when PALMODE = 1.
4	MASTERB	I	Video sync mode selection control terminal (LVTTL level). Internal sync mode when MASTERB = 0. External sync mode when MASTERB = 1. However, when CDGMODE = 1, mode is fixed to the external sync mode regardless of MASTERB status so that the MASTERB terminal functions the switch selecting either 262 (NTSC) or 312 (PAL) scanning line when MASTER B = 1, or 263 (NTSC or 313 (PAL) scanning line when MASTER B = 0, in the non-interlaced scanning. (See page 10) (This terminal has the pull-up function).
5	RESETB	I	Reset input terminal (LVTTL level). Enter the reset state when this terminal is set to “L”.
6-13	B7-B0	I	The data B input terminal (LVTTL level). Data input range is from 16 to 235, or from 0 to 255 (as controlled by the DICNT terminal) When FORM = 0, connect this terminal to ground.
14	TESTI0	I	Test input terminal Enters the test mode when TESTI0 = 1. Connect this terminal to ground or set it open.
15	PXCLK	I	Pixel clock input terminal (LVTTL level). When inputting the pixel clock, select the input pixel clock frequency that is appropriate for the respective modes. (See page 7.) Frequency accuracy of the subcarrier signal of the video signal depends on that of this clock signal. Therefore, determine the frequency accuracy of the pixel clock according to the required accuracy of the subcarrier signal.
16, 30, 63	VCC	—	Digital block power supply (+3.3 V or +5 V).
17	HSYNCB	I/O	Horizontal sync signal input/output terminal (LVTTL level). This terminal functions as the input terminal during the external sync mode, and as the output terminal during the internal sync mode. During the external sync mode, the input sync signal is sampled by PXCLK and only the fall-down edge is detected. The standard cycle of HSYNCB is 858 clock (VCD_NTSC) or 864 clock (VCD_PAL). (For CDG mode, see page 9.) This terminal functions as the output terminal during the internal sync mode.
18	VSYNCB	I/O	Vertical sync signal input/output terminal (LVTTL level). This terminal functions as the input terminal during the external sync mode, and as the output terminal during the internal sync mode. During the external sync mode, the input sync signal is sampled by PXCLK and the fall-down edge is detected. When the fall-down edges of HSYNCB and VSYNCB agree, the timing is judged to be the start of the ODD field. When they do not agree, the timing is judged to be the start of the EVEN field. This terminal functions as the output terminal during the internal sync mode.
20	FORM	I	Input format selection terminal (LVTTL level). When FORM = 0, the input format is CCIR-601YCbCr (4 : 2 : 2) . When FORM = 1, the input format is RGB input. (This terminal has the pull-up function).

Pin No.	Pin Name	I/O	Description
21	TRAPFEN	I	Internal trap filter control terminal (LVTTL level). Trap filter display is disabled when TRAPFEN = 0. Trap filter is enabled when TRAPFEN = 1. (This terminal has the pull-up function).
22-29	G7-G0	I	The G data or Y data input terminal (LVTTL level). The data input range is from 16 to 235 or from 0 to 255 in the case of the G data (as controlled by the DICNT terminal), and the data input range is from 16 to 235 in the case of the Y data.
31-38	R7-R0	I	The R data or CbCr data input terminal (LVTTL level). The data input range is from 16 to 235 or from 0 to 255 in the case of the R data (as controlled by the DICNT terminal), and the data input range is from 16 to 240 in the case of the CbCr data.
40	CLKOUT	O	Clock output terminal Clock output of the doubled frequency of PXCLK when CLKMODE = 0. Clock output of 1/2 the frequency of PXCLK when CLKMODE = 1.
41	FLDOUT	O	Field indication signal output terminal Outputs "H" when the field is the ODD field. Outputs "L" when the field is the EVEN field. Polarity of the terminal becomes invalid during the external sync mode.
42	OSDCLK	O	Clock output terminal for OSD_IC The clock signal having 1/2 the frequency of the input PXCLK frequency is output when CLKMODE = 0. The clock signal having 1/4 the frequency of the input PXCLK frequency is output when CLKMODE = 1. (See page 6.)
43	DICNT	I	The video data input control terminal (LVTTL level). Set this terminal to DICNT = 0 normally. When DICNT = 1 is set, the data input range of RGB can be expanded to the range of 0 to 255 on the condition that FORM = 0. When FORM = 1, the Cb data can be input starting from the odd cycle. (See page 8.) (This terminal has the pull-up function).
44	SLEEP	I	The SLEEP mode control terminal (LVTTL level). Normal operation mode is selected when SLEEP = 0. The SLEEP mode is selected when SLEEP = 1.
45	AVCC	—	Analog block power supply (+5 V).
46, 47, 50	NC	—	Be sure to set this terminal to open.
48	VIDEO	O	Analog video output terminal (This terminal is driven in 37.5 Ω).
49	IREF	—	An external resistor is connected to this terminal, that sets the full scale output current value.
51	COMP	—	An external de-coupling capacitor is connected to this terminal, that is used for phase compensation.
52, 53	AGND	—	Analog ground.
54	PAL4FSC	I	CDG_PAL4FSC mode selection control terminal. (LVTTL level). Status of this PAL4FSC terminal is made valid only when PALMODE = 1 and CDGMODE = 1. The mode is the CDG_PAL908fH mode when PAL4FSC = 0. The mode is the CDG_PAL4FSC mode when PAL4FSC = 1.
55-57	OSD2-OSD0	I	The input terminal to specify the OSD color. (LVTTL level). This input signal sampled by PKCLK and is encoded instead of the data supplied from the RGB input terminal when VSW = 1. When the OSD function is not used, connect this terminal to ground.

Pin No.	Pin Name	I/O	Description
58	VSW	I	The OSD background video control terminal. (LVTTL level). This input signal sampled by PXCLK and displays the data that is supplied from the RGB input terminal when VSW = 0, and displays the data that is supplied from the OSCD 0-2 input terminal when VSW = 1.
60	CDGMODE	I	The CDG mode selection control terminal. (LVTTL level). The VCD mode is selected when CDGMODE = 0. The CDG mode is selected when CDGMODE = 1. (See page 9.) (This terminal has the pull-up function).
61	PAL60	I	The PAL60 mode selection control terminal. (LVTTL level). Set this terminal to PAL60 = 0 normally. The PAL60 mode is selected when PALMODE = 1 and PAL60 = 1 at the same time. The setting of PALMODE = 0 and PAL60 = 1 is reserved. (See page 9.) (This terminal has the pull-up function).
62	CLKMODE	I	The pixel rate frequency input selection terminal. (LVTTL level). The pixel rate frequency is input to the PXCLK terminal when CLKMODE = 0. The double pixel rate frequency is input to the PXCLK terminal when CLKMODE = 0. (See page 7.) (This terminal has the pull-up function).
64	PLLGND	—	PLL ground.

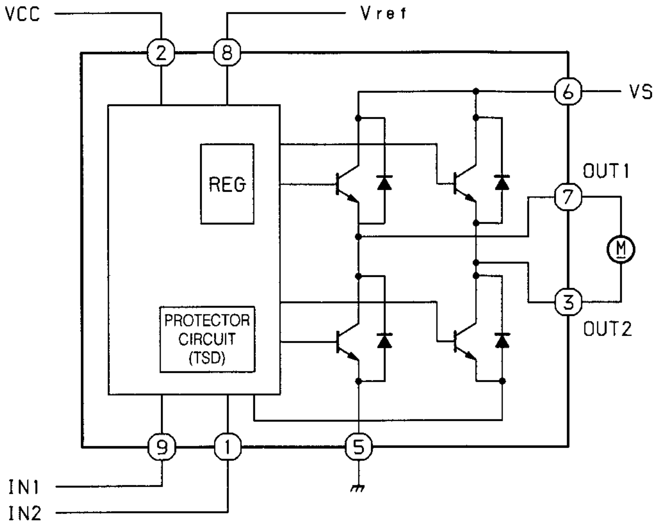
IC, CXP84548-112Q

Pin No.	Pin Name	I/O	Description
1	CLV-W	I	Fixed to CLV-W: 1, CLV-N.
2	HSTSTP	O	Cause of STOP. 1: STOP by the stop request from the host.
3	VCD	O	DISC type. 1: When no in the VCD DISC
4	XRST	O	SSP/DSP reset output. Reset at “L”.
5	XHRST	O	CXD1856 reset output. Reset at “L”.
6	HA0	O	Title back: Connected to CXD1856 HA0.
7	HA1	O	Title back: Connected to CXD1856 HA1.
8	HA2	O	Title back: Connected to CXD1856 HA2.
9	HA3	O	Title back: Connected to CXD1856 HA3.
10	HXCE	O	Connected to title back ROM XCE.
11	HRW	O	Connected to bus select DIR, CXD1586 HRW.
12	BUS	O	Connected to bus select XG.
13	HCLK	I/O	Clock for address count.
14	HD0	I/O	Title back bus data 0.
15	HD1	I/O	Title back bus data 1.
16	HD2	I/O	Title back bus data 2.
17	HD3	I/O	Title back bus data 3.
18	HD4	I/O	Title back bus data 4.
19	HD5	I/O	Title back bus data 5.
20	HD6	I/O	Title back bus data 6.
21	HD7	I/O	Title back bus data 7.
22	PH0	O	Not used.
23	PICT	O	Title back bank select. (Connected to A16).
24	HRST	O	Address counter RST output.
25	VRST	O	RL5C293 reset output. Reset at “L”.
26	PALMD	O	PAL mode output. NTSC: L, PAL: “H”.
27	PAL60	O	PAL mode output. H: PAL60 (used together with PALMD: H)
28	XHDT	I	Connected to CXD1856 XHDH.
29	XHCS	O	Connected to CXD1856 XHCS.
30	XRST	I	Reset input.
31	EXTAL	I	External 12 MHz ceramic oscillator is connected to this terminal.
32	XTAL	O	External 12 MHz ceramic oscillator is connected to this terminal.
33	VSS	I/O	Connected to ground.
34	PE6	O	Not used.
35	PE7	O	Not used.
36	AVSS	—	GND.
37	AVREF	—	3.3 V power supply.
38	OSDDT	O	OSD serial, data output.
39	OSDXCS	O	OSD serial, CS output.
40	OSDCLK	O	OSD serial, clock output.
41	TRSRVO	I	Tracking servo ON/OFF. 1: ON, 0: OFF.

Pin No.	Pin Name	I/O	Description
42	HALT	I	HALT input. 1: HALT detected (A/D conversion value is 80 H or higher).
43	LSW	I	Pick up inside switch input. "L" when INSIDE is detected.
44	EMPH	I	Emphasis input. ON only (CD-DA) at "H".
45	VMODE	I	NTSC/PAL AUTO/PAL selection. (Analog input).
46	O-BUSY	O	Busy input to host microprocessor.
47	I-BUSY	I	Busy output from host microprocessor.
48	CLOCK	I	Host microprocessor, clock input.
49	COMMAND	I	Host microprocessor, data input.
50	STATUS	O	Host microprocessor, data output.
51	SQCK	O	Clock output for reading SQSO.
52	SQSO	I	Inputs such as SUBQ, PCM, DATA, level data, status and others.
53	PB7/SO1	O	Not used.
54	FOK	I	FOK input.
55	GFS	I	GFS input.
56	SENS2	I	SENS 2 input.
57	SENS	I	DSP SENS input.
58	MD2	O	DSP DIGITAL OUT MUTE output. ON at "H".
59	RBPLS	O	Tracking balance fraction data output. (A+B)/2.
60	VSYNC	I	V. SYNC input.
61	SCOR	I	Subcode sync input. "H" during S0,S1 input.
62	HIRQ	I	Connected to CXP1856 HIRQ.
63	CNIN	I	C input.
64	CLOK	O	Clock output to CD DSP.
65	P15	O	Not used.
66	DATA	O	Data output to CD DSP.
67	XLAT	O	XLAT output to CD DSP.
68	AMUTE	O	LINE OUT MUTE output. Mute at "H".
69	DMUTE	O	DSP mute output. Mute at "H".
70	VMUTE	O	RL5C293 sleep output. Normally "L" / Sleep at "H".
71	DEEM	O	Deemphasis output. Deemphasis ON at "H".
72	VDD	—	3.3 V power supply.
73	NC	—	Not used.
74	PG4	O	Not used.
75	PG5	O	Not used.
76	PG6	O	Not used.
77	PG7	O	Not used.
78	SH	I	Pick that is equipped with shutter. 1: With shutter.
79	AUTO	I	Auto adjustment YES/NO. 1: Auto adjustment YES.
80	DISP	I	Auto adjustment value indication. 1: Indicated.

IC BLOCK DIAGRAM

IC, TA7291S

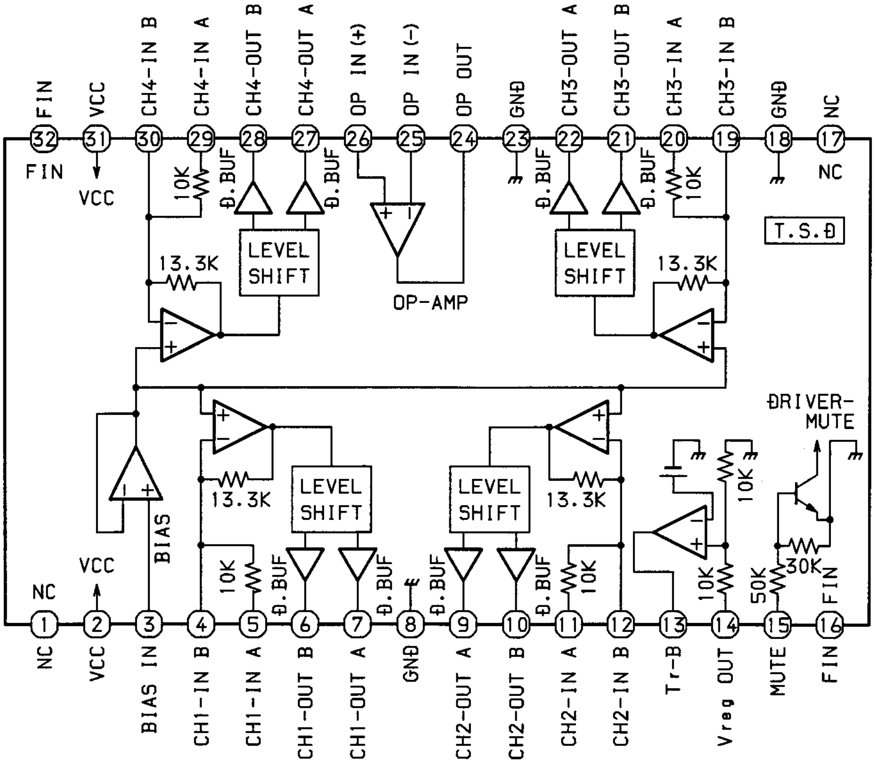

VCC
Vref
2
8
6
VS
REG
OUT1
7
M
3
OUT2
PROTECTOR CIRCUIT (TSD)
9
1
5
IN1
IN2

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

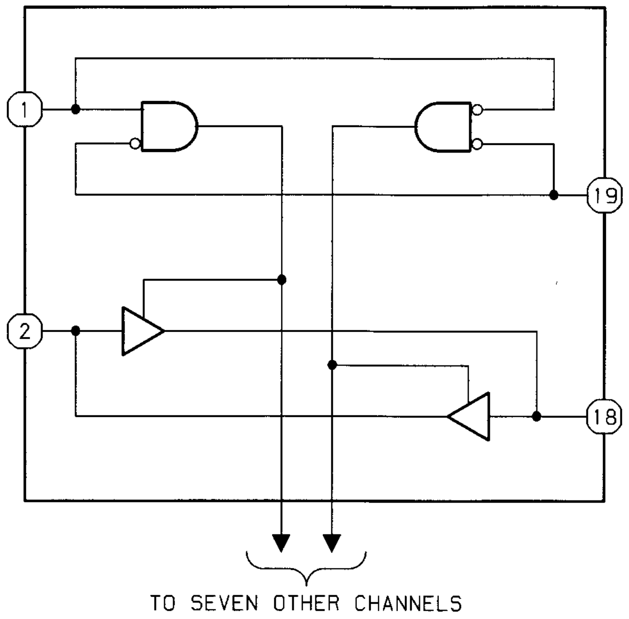
∞ : HI IMPEDANCE

NOTE : INPUT "H" ACTIVE

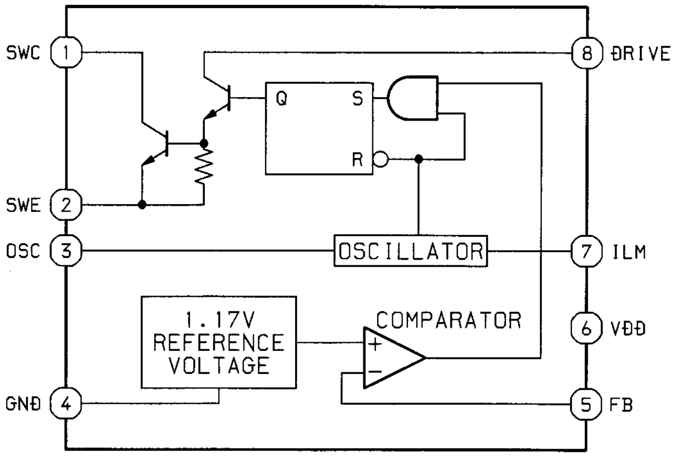
IC, BA6897


FIN
VCC
CH4-IN B
CH4-IN A
CH4-OUT B
CH4-OUT A
OP IN (+)
OP IN (-)
OP OUT
GND
CH3-OUT A
CH3-OUT B
CH3-IN A
CH3-IN B
GND
NC
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
FIN
VCC
NC
10K
D.BUF
D.BUF
D.BUF
D.BUF
10K
T.S.D
LEVEL SHIFT
13.3K
OP-AMP
LEVEL SHIFT
13.3K
BIAS
DRIVER-MUTE
LEVEL SHIFT
13.3K
LEVEL SHIFT
13.3K
10K
10K
D.BUF
D.BUF
D.BUF
D.BUF
10K
10K
50K
30K
VCC
NC
FIN
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
NC
VCC
BIAS IN
CH1-IN B
CH1-IN A
CH1-OUT B
CH1-OUT A
GND
CH2-OUT A
CH2-OUT B
CH2-IN A
CH2-IN B
Tr-B
Vreg OUT
MUTE
FIN

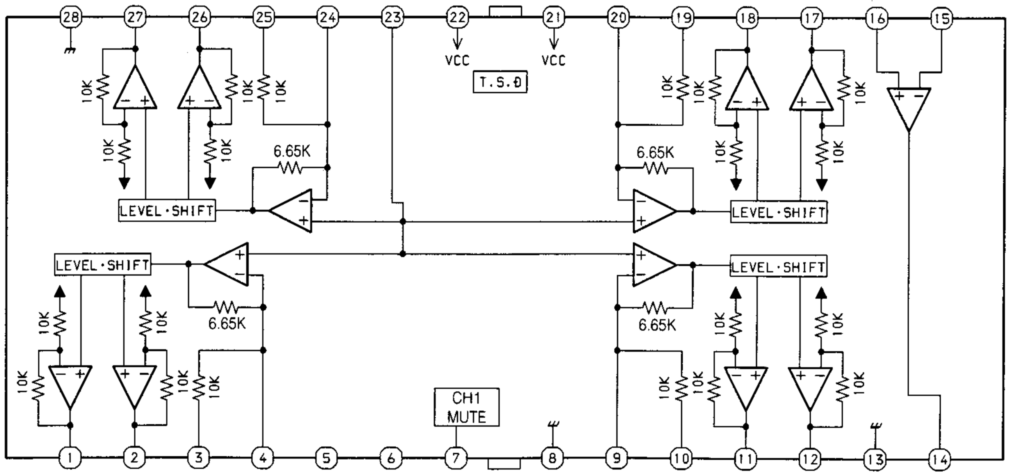
IC, SN74LS245APW


1
19
2
18
TO SEVEN OTHER CHANNELS

IC, M5291FP

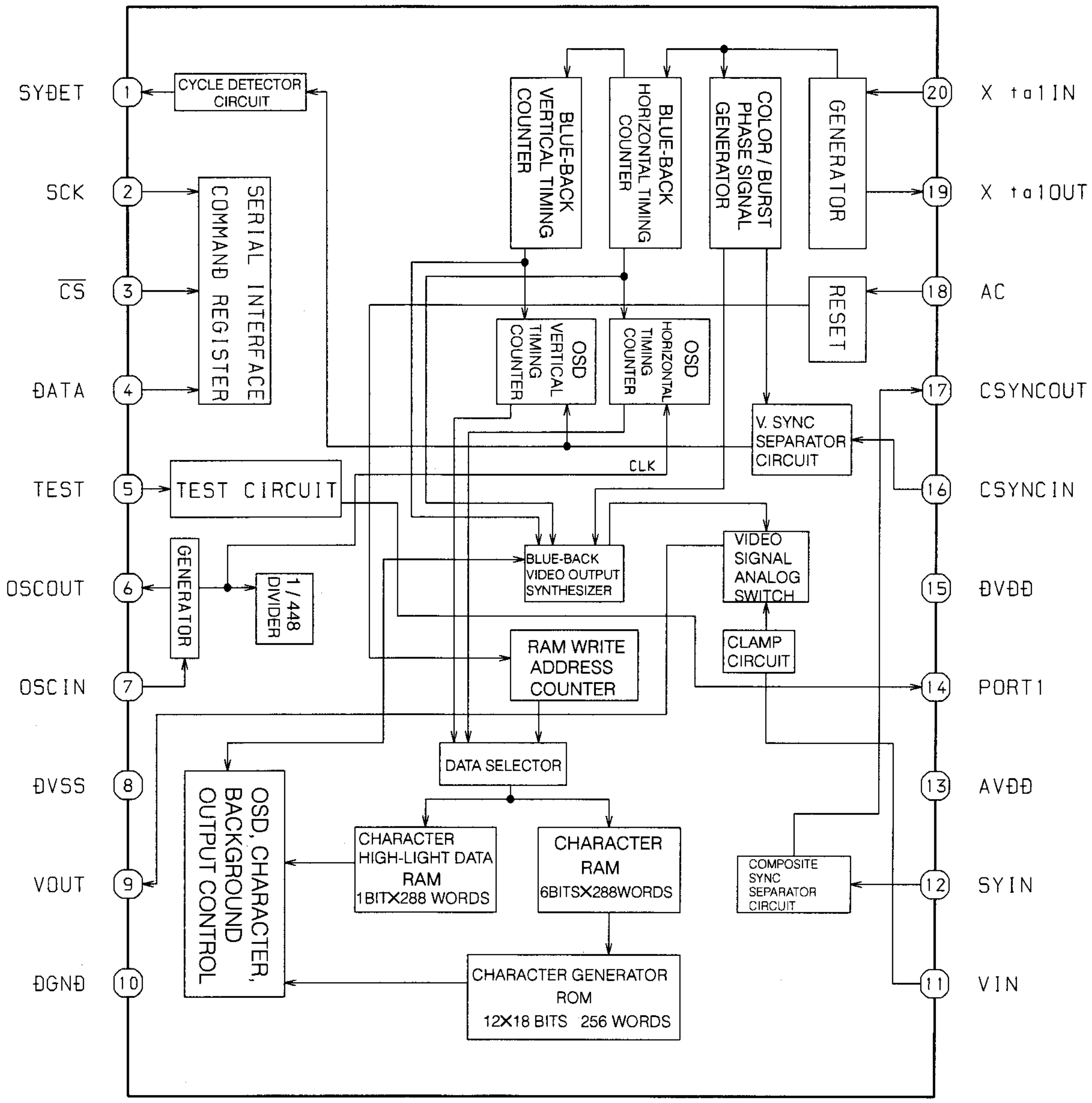

SWC 1
SWE 2
OSC 3
GND 4
Q
S
R
OSCILLATOR
1.17V REFERENCE VOLTAGE
COMPARATOR
+
−
8 DRIVE
7 ILM
6 VDD
5 FB

IC, BA5915


28
27
26
25
24
23
22
21
20
19
18
17
16
15
VCC
VCC
T.S.D
10K
6.65K
LEVEL·SHIFT
CH1 MUTE
1
2
3
4
5
6
7
8
9
10
11
12
13
14

T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, BU2874AFV



SYDET ①
SCK ②
CS ③
DATA ④
TEST ⑤
OSCOUT ⑥
OSCIN ⑦
DVSS ⑧
VOUT ⑨
DGND ⑩
X tal IN ⑳
X tal OUT ⑲
AC ⑱
CSYNCOUT ⑰
CSYNCIN ⑯
DVDD ⑮
PORT1 ⑭
AVDD ⑬
SYIN ⑫
VIN ⑪
CYCLE DETECTOR CIRCUIT
SERIAL INTERFACE COMMAND REGISTER
TEST CIRCUIT
GENERATOR
1/448 DIVIDER
BLUE-BACK VERTICAL TIMING COUNTER
BLUE-BACK HORIZONTAL TIMING COUNTER
COLOR / BURST PHASE SIGNAL GENERATOR
GENERATOR
RESET
OSD VERTICAL TIMING COUNTER
OSD HORIZONTAL TIMING COUNTER
V. SYNC SEPARATOR CIRCUIT
CLK
BLUE-BACK VIDEO OUTPUT SYNTHESIZER
VIDEO SIGNAL ANALOG SWITCH
CLAMP CIRCUIT
RAM WRITE ADDRESS COUNTER
DATA SELECTOR
OSD, CHARACTER, BACKGROUND OUTPUT CONTROL
CHARACTER HIGH-LIGHT DATA RAM 1BIT×288 WORDS
CHARACTER RAM 6BITS×288WORDS
COMPOSITE SYNC SEPARATOR CIRCUIT
CHARACTER GENERATOR ROM 12×18 BITS 256 WORDS

TEST MODE

< How to Enter the Test Mode >

While pressing the PROGRAM key, insert the AC power cord to AC wall outlet.

< When the Machine Has Entered the Test Mode >

The system is initialized and the main power is turned on. During the test mode, the main power of the CD block is turned on always. The test mode starts with the [Sled mode].

< Types of Test Mode >

[Sled mode]

All displays of the FL tubes light. The optical pickup can be moved by pressing [⟨⟨] or [⟩⟩] key.

Pressing the [□] key establishes the [Focus mode].
Pressing the [▷] key establishes the [Play mode].

Pressing the [⟨⟨] key moves the sled to outer circumference.
Pressing the [⟩⟩] key moves the sled to inner circumference.
Pressing OPEN/CLOSE key opens or closes the tray.

[Focus mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search is performed in the focus mode regardless whether disc is inserted or not, or focus OK or NG. (Numbers of times of focus search is unlimited. Auto sequence is not used.)
Focus servo is not locked in even the focus is obtained.

Pressing the [▷] key establishes the [Play mode].
Pressing the [⟨⟨] key decreases the track number to -1.
Pressing the [⟩⟩] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

[Play mode]

Lighting of all displays of the FL tubes are turned off and returns to normal display. The focus search (numbers of search is unlimited) is performed. When focus comes to in-focus, the focus servo is locked in and the machines enters the normal play mode.
During [Play mode], GFS and sound skipping are not monitored.
When focus becomes out-of-focus, another attempt is made to search for focus.
The tracking servo and the sled servo can be turned on and off by pressing the [▷] key.

Pressing the [□] key establishes the [Sled mode].
The [||] display can be turned on and off by pressing the [▷] key .

While the [||] display is turned off:
CLV-A Tracking servo: on
Sled servo: on
While the [||] display is turned on:
CLV-A Tracking servo: off
Sled servo: off

Pressing the [⟨⟨] key decreases the track number to -1.
Pressing the [⟩⟩] key increases the track number to +1.
Pressing OPEN/CLOSE key opens or closes the tray.
The machine enters the [Sled mode].

< How to Exit the Test Mode >

Remove the AC power cord from power outlet, or turn off the system power.

The focus bias, tracking balance and the tracking gain adjustment values can be displayed, modified, set and released in the Play mode only of the following Test mode.
When the PRGM button is pressed during Play, the adjustment value of the focus bias is displayed. After that, you can enter the followings:

- FOCUS - BIAS

  [Display]: Pressing the RANDOM key during disc play, the focus bias setting value is displayed.
  [Adjustment]: Every pressing of the ⏮ key decrements the adjustment value by 1 step.
  Every pressing of the ⏭ key increments the adjustment value by 1 step.
  [Set]: The adjustment value is set by pressing the PLAY key after adjustment. Playback a disc after setting.
  [Release]: The set value can be released by pressing the STOP key.

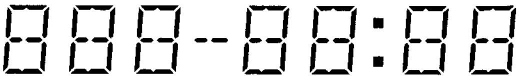
- TRACKING - BALANCE

  [Display]: Pressing the REPEAT key during disc play, the tracking balance setting value is displayed.
  [Adjustment]: The same procedure as in the FOCUS - BIAS.
  [Set]: The same procedure as in the FOCUS - BIAS.
  [Release]: The same procedure as in the FOCUS - BIAS.

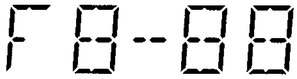
- TRACKING - GAIN

  [Display]: Pressing the DISPLAY key during disc play, the tracking balance setting value is displayed.
  [Adjustment]: The same procedure as in the FOCUS - BIAS.
  [Set]: The same procedure as in the FOCUS - BIAS.
  [Release]: The same procedure as in the FOCUS - BIAS.

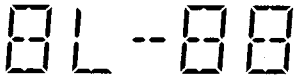
Display method



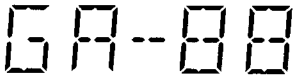
- FOCUS - BIAS



- TRACKING - BALANCE



- TRACKING - GAIN



1. How to Activate CD Test Mode
Insert the AC plug while pressing the function CD button.
FL display tubes will show the "start mode" display (repeating the indications "TEST" and "00 00 00" alternately), and the test mode will be activated.

2. How to Cancel CD Test Mode
Either one of the following operations will cancel the CD test mode.
- Press the function button. (except CD function button)
- Press the power switch button.
- Disconnect the AC plug

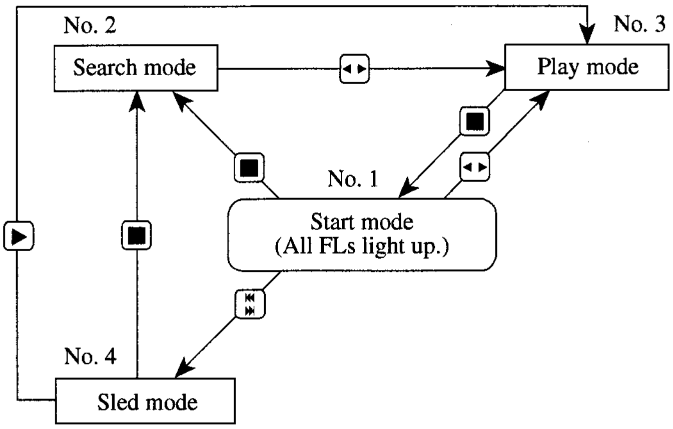
3. Description of the CD Test Mode Functions
When test mode is activated, the following mode functions from No. 1 to No. 4 can be used by pressing the operation keys.

[Values of Focus Balance, Tracking Balance and Tracking Gain]
The displayed contents show the actual value after flashing three times.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	Start mode display	• Test mode is activated. • CD block power is ON.	• Automatic adjustment value
Search mode No.2	■ key	"CD"	• Laser diode turns always ON. • Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	• APC circuit check • Laser current measurement (Laser current control. Across a resistor connected between emitter and GND.) FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀ ▶ key	Normal display	• Normal playback	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check DRF
Sled mode No.4	⏮ key ⏭	Start mode display	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 2 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

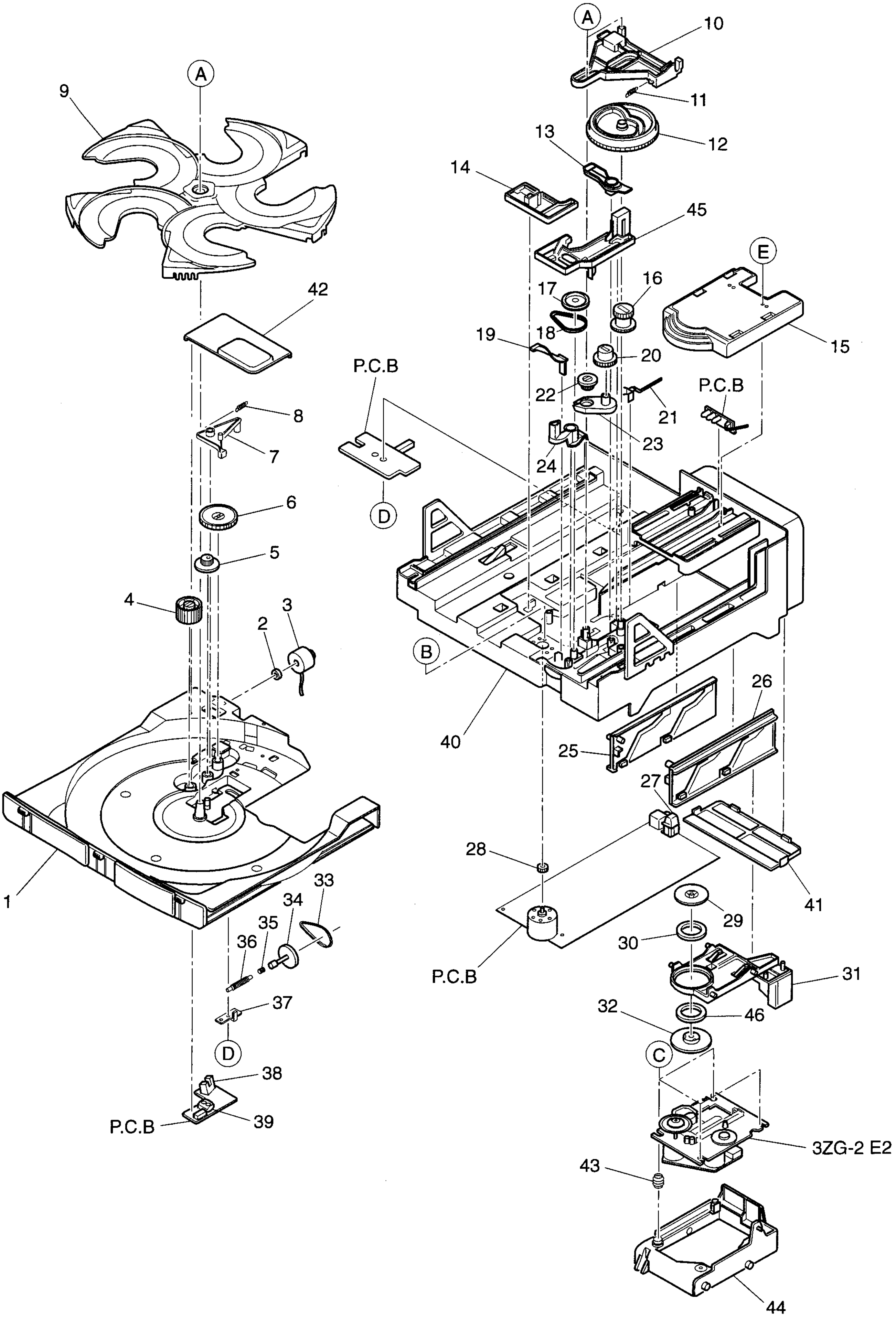
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
* NOTE 2: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.
* NOTE 3: The machine cannot enter the traverse mode even though the PAUSE button is pressed during PLAY. It enters the normal PAUSE state.

4. Operation Outline
The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

MECHANICAL EXPLODED VIEW 1/1



A
10
11
12
13
14
45
E
16
17
15
18
19
20
P.C.B
22
21
P.C.B
23
24
D
9
A
42
8
7
6
5
4
3
2
B
40
25
26
27
28
41
29
30
P.C.B
31
32
46
C
3ZG-2 E2
43
44
1
33
34
35
36
37
D
38
39
P.C.B

MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

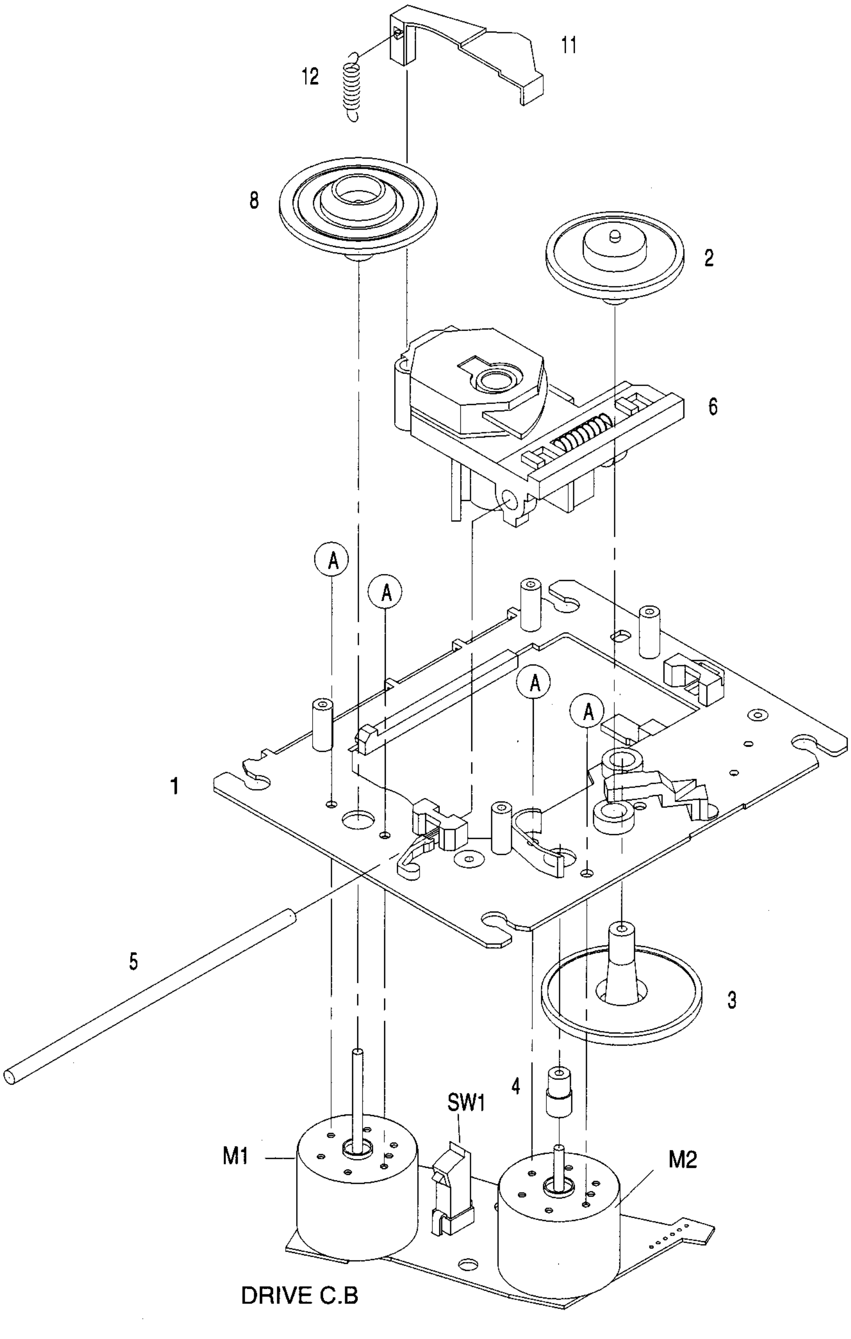
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZG1-001-310		TRAY,5CD
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	87-A90-036-010		MOT ASSY,RF-300CA-11
4	86-ZG1-228-110		GEAR,TT-B
5	86-ZG1-227-110		GEAR,TT-A
6	86-ZG1-223-110		GEAR,WORM-WHEEL TT
7	86-ZG1-224-110		LEVER,TT(*)
8	86-ZG1-226-010		SPR-E,LEVER TT
9	86-ZG1-002-210		TURN TABLE,5CD
10	86-ZG1-211-210		JOINT,CAM
11	86-ZG1-216-010		SPR-E,JT
12	86-ZG1-203-210		GEAR,MAIN CAM
13	86-ZG1-213-110		LEVER,LOAD
14	86-ZG1-214-110		LEVER,PROTECT
15	86-ZG1-004-010		REFLECTOR,CD
16	86-ZG1-205-110		GEAR,TRAY
17	84-ZG1-207-010		PULLEY,RELAY
18	84-ZG1-209-010		BELT,SQ1.8-117.7
19	86-ZG1-217-010		LEVER,SW
20	86-ZG1-206-110		GEAR,RELAY B
21	86-ZG1-220-110		SPR-P,LOCK
22	86-ZG1-204-110		GEAR,RELAY A
23	86-ZG1-218-110		PLATE,GEAR
24	86-ZG1-208-010		LEVER,TRAY
25	86-ZG1-209-110		SLIDER,CAM L(*)
26	86-ZG1-210-110		SLIDER,CAM R(*)
27	84-ZG1-244-310		CABI,OPTICAL
28	84-ZG2-228-010		PULLEY,MOT
29	83-ZG3-211-010		PLATE,DISC<YVOS1NDM,VOS1NDSM>
29	86-ZG1-242-010		PLATE,DISC BLK <EXCEPT YVOS1NDM,VOS1NDSM>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
30	83-ZG3-602-010		RING,MAG<YVOS1NDM,VOS1NDSM>
30	84-ZG1-300-010		MAGNET,CLAMPER 4P <EXCEPT YVOS1NDM,VOS1NDSM>
31	86-ZG1-215-010		HLDR,CHUCK
32	86-ZG1-238-010		HLDR,MAGNET 6ZG N
33	86-ZG1-225-010		BELT,SQ1.2-32.9
34	86-ZG1-221-010		PULLEY,TT
35	86-ZG1-231-010		SPR-C,WORM
36	84-ZG1-256-010		GEAR,WORM N2
37	86-ZG1-232-010		SPR-P,WORM
38	86-ZG1-229-010		HLDR,SENSOR
39	86-ZG1-230-010		HLDR,DISC SENSOR
40	86-ZG1-201-210		CHAS,MECHA
41	86-ZG1-005-110		COVER,CHAS
42	86-ZG1-003-110		COVER,TRAY
43	80-CD3-214-010		CUSH CD A
44	86-ZG1-202-210		HLDR,MECHA
45	86-ZG1-212-410		SLIDER,LOAD
46	86-ZG1-239-110		PLATE,DISC
A	87-078-148-010		VFT2+3-12(F10) BLK
B	87-251-072-410		U+2.6-5
C	81-ZG1-254-010		S-SCREW,MECH HLDR
D	87-067-579-010		TAPPING SCREW, BVT2+3-8
E	87-067-703-010		TAPPING SCREW, BVT2+3-10

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E2)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E2)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110-8710, JAPAN TEL:03 (3827) 3111

931261 Printed by: Schaltungsdienst Lange, Berlin (GERMANY)